General Practitioners' Attitudes to Suicide Prevention in Older People and Barriers to Assessing Risk

A Public Health Psychology Approach

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Submitted in part fulfilment for the degree of Doctorate in Clinical Psychology at the University of Edinburgh (April 2010).

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank everyone involved in supporting and helping me to complete my doctoral research. Particular thanks to my academic supervisor, David Gillanders, who provided support and encouragement as well as a valuable perspective on my research. If it were not for him I would still be stuck among the trees not seeing the wood. I would also like to thank all the General Practitioners who devoted some of their valuable time to participating in the study and my Older Adult supervisor Pauline Thomson for sparking my interest in this area.

On a personal note I would like to thank my family and friends who proved a wonderful source of support. Special thanks to my parents who provided endless hours of entertainment, love and care for my son Arran allowing me to focus my attentions on the task at hand! I would also like to thank my husband Ron for his unconditional love and patience and helping me keep perspective throughout the whole process. Last but by no means least, a very special thanks goes to Arran who was a lovely distraction from everyday stresses of completing my doctoral training. The fact I have been able to achieve my goal of becoming a Clinical Psychologist is all the more special for having him in my life.

I would like to dedicate this thesis to my grandparents, especially my Gran, who I know would have been so proud of my achievement.

Declaration of Work

I hereby declare that this thesis was written by me and that I conducted the work detailed herein.

ABSTRACT

Background: Suicide is an important public health problem. Older people constitute the highest rate of completed suicides worldwide, with depression as the leading risk factor within this population. However older people's mental health has long been a neglected area both in terms of public policy and service provision. Research suggests that despite the fact older people visit their primary care practitioner more frequently than their younger counterparts, depressive symptoms and suicidal ideations are often not identified. Furthermore, even when psychological distress is recognised, older people are less likely to be treated or referred on to appropriate mental health services, despite the availability of efficacious treatments. Research suggests that "ageist" attitudes within society adversely affect the health-seeking behaviours of older people as well as health-care practitioners' clinical practice. Such attitudes require particular consideration when attempting to reduce suicide rates in older populations.

Aim: The present research looks to enhance understanding of potential barriers to recognising and treating late-life depression and suicidal ideation by exploring GPs' attitudes and self-reported clinical practice in this area.

Method: The study adopted a within-subject, questionnaire based design. 399 General Practitioners within a single health board area completed a self-administered questionnaire exploring attitudes towards suicide prevention in older people and self-reported clinical practice in terms of risk assessment with older adult populations.

Results: Participants' attitudes towards suicide prevention in older people, on the whole, were marginally negative. Furthermore, there was a positive correlation between participants' attitudes and their self-reported clinical practice in terms of conducting a suicide risk assessment with this population - more negative attitudes were associated with less proactive clinical practice. There was also a relationship between age of participant and attitude where older GPs were more pessimistic regarding suicide prevention in older people. Previous training in suicide risk assessment did not appear to impact on attitudes towards suicide prevention, but did result in more pro-active clinical practice.

Discussion: The present study provides a useful insight into GPs attitudes towards suicide prevention in older people and how such attitudes may impact on clinical practice. The findings have significant clinical implications in terms of multi-level approaches to reducing suicide rates within older populations. At an individual level it is important to enhance primary care practitioners' knowledge and skills regarding late-life depression and suicidality, while simultaneously highlighting factors associated with healthy ageing. At a wider strategic level it is necessary to develop sustainable mental health services for an ageing population while reducing age related discrimination and the stigma of mental illness through appropriate public policy and legislation. The potential role of clinical psychology at each of these levels was demonstrated. The strengths and limitations of the present study are also discussed along with suggestions for further research.

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1. INTRODUCTION

1.1 Chapter Overview

Suicide is an important public health issue. Of particular concern is the fact that suicide rates in Scotland are higher than in any other part of the UK and have more than doubled over the last 30 years (Brock *et al.*, 2006). Furthermore, older people (over the age of 65 years) constitute the highest rate of completed suicides worldwide with depression as the leading risk factor (World Health Organisation, 2002). The increased prevalence of suicide within this population may be related to greater experience of major life events, including bereavement of a life partner and peers, retirement, loss of independence as a result of a move to a care-home, and decline in physical health, although this list is not exhaustive.

The following chapter will provide a summary of the issues facing mental health services as a result of increasing suicide rates and expected demographic shifts in Scotland's population over the next few decades. Of particular note is the predicted increase in the number of people above pensionable age (currently 65 years old) as people live longer due to advances in health care and living conditions. Arguably, in order to ensure sustainable services for the future it is necessary to consider current service provision for older people experiencing mental health difficulties, possible gaps in services, and barriers that may influence development and change.

A discussion will also be presented with regard to research concerning societal attitudes towards older people experiencing mental health difficulties, including suicidal behaviour, and how these attitudes may be reflected in health care provision and clinical practice. There will be a particular focus on primary care given that the majority of older people with mental health difficulties are not referred to specialist services but rather treated within primary care settings (Godfrey, 2005). Gaps in the literature will be highlighted followed by the aims and hypotheses of the present study in order to address these gaps.

1.2 Changing Demographics

It is projected that the population of Scotland will experience significant demographic change over the next 20 years. According to the General Register Office for Scotland (2007), there will be an overall increase in our population by 5% between 2006 and 2031. Of significant note is the projection that the number of younger people is expected to fall during this time while the number of older people is projected to increase considerably. The number of people of pensionable age is expected to increase by 31% from 0.98 million to 1.29 million by 2031. This figure takes into consideration the fact that the state pension age will rise over this time period. If such changes were not considered then the number of people of pensionable age would increase by 58%. The largest projected growth can be seen in the number of people over the age of 75 years, where figures are projected to increase by 81%.

Not only are people living longer, advances in health care and better living conditions have also added healthy years to life (Laidlaw & Pachana, 2009; Vaillant & Mukamal, 2001). That said, the longer an individual lives, the greater the opportunity for experiencing significant life events that may impact on psychological well-being, such as loss of a loved one, retirement and a gradual deterioration of physical health (Baltes & Smith, 2003). Consequently, changes in our demographics create significant challenges for health care providers and health policy. As people live longer we need to think of new ways to design and develop services that meet the psychological needs of an older population.

1.3 Prevalence of Mental Health Disorders in Older People

Approximately a third of older people (over the age of 65 years) experience significant mental health difficulties (Maule, Milne & Williamson, 1984). As Table 1 indicates the most common mental health problem is depression, closely followed by anxiety and dementia. The rates of psychological disorders increase significantly when considering older people living in care homes.

Table 1: Percentage of people aged 65 years + with different mental health problems in the community, acute hospitals and care homes

	Community (clinical criteria)	Community (Symptoms)	Acute Hospitals	Care Homes
Depression	10-15	25	29	40
Anxiety	2-4	10-24	8	6-30
Delirium	1-2	Unknown	20	"very common"
Dementia	5	Unknown	31	50-80
Schizophrenia	0.5	2-5	0.4	Unknown
Alcohol misuse	2-15	Unknown	3	Unknown
Drug misuse	11.1	Unknown	Unknown	Unknown

Taken from the 2nd report from the UK Inquiry into Mental Health and Well-Being in Later Life (2007) p.17.

Furthermore, rates of depression increase with age, affecting approximately 20% of individuals aged 65 to 69 years of age rising to 40% of those over 85 years of age (Craig & Mindell, 2007). These figures may not be representative as late-life depression often goes unrecognised and untreated (Charney *et al.*, 2003), despite the availability of efficacious pharmacological and psychological treatments (Bruce *et al.*, 2004). Possible reasons for this include health practitioners' lack of knowledge regarding risk and treatment, the underreporting of mental health difficulties by older people as a result of the stigma of mental illness in society, and specific cohort effects (e.g. Bruce *et al.,* 2004; Quinn *et al.,* 2009). These factors will be considered more fully later in the chapter.

It is important to note that mental health difficulties are not a necessary part of growing old. Indeed many older people live fulfilling and meaningful lives, making significant contributions to society (Baltes & Smith, 2003; Laidlaw & Pachana, 2009; Vaillant & Mukamal, 2001). Given increases in longevity in our society, however, we can expect the prevalence of mental illness to also increase.

1.4 Suicide in Older People

1.4.1 Prevalence of Suicide in Older People

A tragic consequence of the high prevalence of mental ill health in older people is loss of life. In Scotland 142 older people took their own lives in 2008 (General Register Office for Scotland, 2009). The actual rate of suicide may by greater than this as often an older person's *physical* health problem is cited on the death certificate, generally as a result of a

family doctor not wishing to cause further distress for the families affected (O'Carroll, 1989). Furthermore, older people, particularly those in residential care, are more likely to engage in indirect self-destructive behaviours to end their lives such as refusing to eat food or not adhering to a medication programme (Pearson & Brown, 2000).

There is a global pattern which suggests that suicide rates increase with age, as seen in Figure 1 (World Health Organisation, 2002).

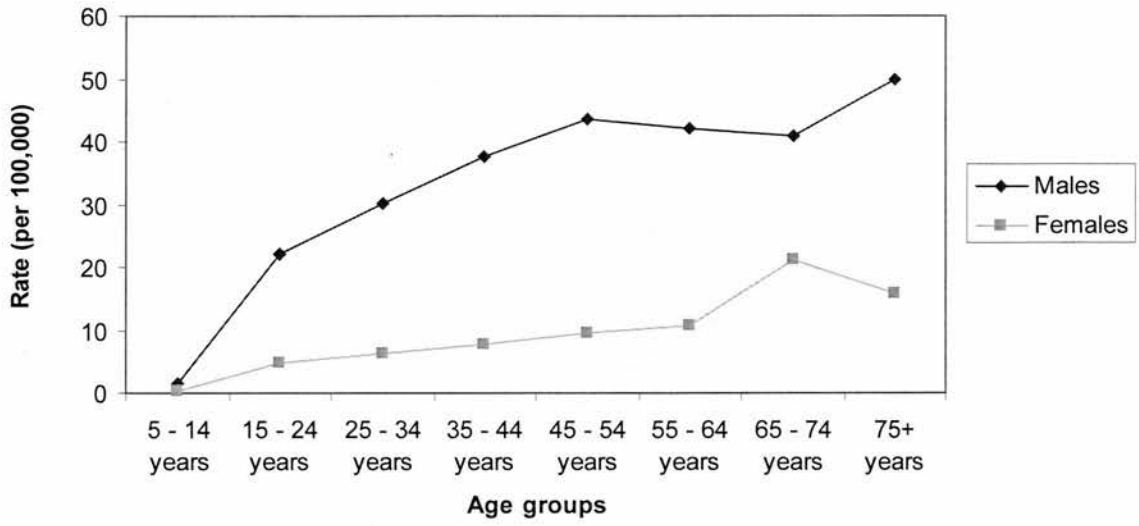

Figure 1: Worldwide Distribution of Suicide Rates by Gender and Age, 2000

(Figures extracted from WHO, 2002)

Furthermore, research indicates that older people are more likely to die as a result of a suicide attempt in comparison to younger people (Conwell, Duberstein & Caine, 2002; McIntosh, 1992). McIntosh (1992) explored the ratio of attempts to completed suicide in both younger and older people. He concluded that the ratio within the general population is approximately 15:1, rising to 200:1 when considering young people below 18 years of age. In contrast the ratio of attempts to completed suicide in older people is as low as 4:1.

According to Secouler (1998) a possible reason why completion rates are higher in older people is that their actions are less likely to be intended to impact negatively on another person. Indeed the fear of upsetting a significant other is often cited as a reason why older people do not attempt suicide (Miller *et al.*, 2001). It could be hypothesised that a suicide attempt is most lethal when it is not intended to directly affect other people. In contrast

younger people tend to use a suicide attempt as a way to express distress to significant others or as a way to punish those who are perceived to have contributed to the difficult feelings they are experiencing (Carr, 2008). Therefore, their attempts tend to be less lethal.

Conwell *et al.* (1998) argued that the increased lethality in older people is the result of three factors:

1. Older people are more likely to live alone and therefore it is less likely that suicidal ideation or an actual attempt will be recognised and acted upon by a significant other;
2. Older people tend to have a higher burden of physical illness than younger people and may be less able to withstand the physical trauma of a suicide attempt; and
3. Older people have a greater determination; they are less likely to act impulsively and utilise more lethal means.

These factors highlight the importance of identifying older people at risk.

1.5 Policy Relating to Suicide Prevention in Scotland

In response to increasing suicide rates within Scotland, the Scottish Government has introduced a National Strategy Action Plan to Prevent Suicide in Scotland called Choose Life (www.chooselife.net). The strategy sets a target of reducing suicide rates by 20% by 2013. This has been supported by recent Scottish Government policies, Delivering for Mental Health (2006) and Towards a Mentally Flourishing Scotland (2009). Both of these policies make a commitment to increase the provision of evidence-based psychological treatments, prioritising suicide prevention and mental health in later life. They also make a commitment to train 50% of frontline staff by 2010 in suicide risk assessment, as put forward in HEAT (Health improvement, Efficiency, Access, Treatment) target number 5[2]. Although the strategy does not directly address suicide risk in older people, one of its key areas is reducing rates of suicide within this population.

[2] The HEAT system is the performance management arrangement that is used by the Scottish Government to manage the NHS.

Addressing the issue of suicide in all age groups presents a significant challenge for the Scottish Government and Health Boards as a result of negative attitudes towards mental ill health within our society (Department of Health, 2009; Scottish Executive, 2004). This challenge is compounded when considering suicide in older people due to negative attitudes towards the ageing process. For example, research suggests that a significant proportion of health care practitioners (Uncapher & Arean, 2000), family and friends of older people (O'Connell *et al.,* 2004), and older people themselves (Pearson & Brown, 2000; Quinn *et al.,* 2009) view depression and suicidal ideation as a natural consequence of old age. This will be discussed more fully later in the chapter.

1.6 Risk Factors for Suicidal Behaviour in Older People

A recent review of available evidence highlights a gap in research with regards to risk factors for suicidal behaviour in older people (McLean *et al.*, 2008). The majority of risk factors found in all age groups may also be relevant for older people, although by focussing solely on general risk factors we may lose the complexity of mental health issues within this age group.

Risks can generally be broken into three categories: Physical, Social and Psychological (O'Connell *et al.* 2004). These will now be considered in turn with reference to risk within the general population and specifically to older people.

1.6.1 Physical

1.6.1.1 Chronic Illness

Older people themselves identified the absence of physical illness as one factor associated with successful ageing (Strawbridge et al, 1996). There is limited empirical research, however, to suggest that the presence of physical ill health increases the likelihood of an older person ending their life. Harris and Barraclough (1994) conducted a large-scale study of 60 medical disorders and their treatments exploring a possible link with suicide. The research indicated that for all of these disorders, suicide is most prevalent amongst

middle-aged people compared with older age groups. This was particularly true for the following illnesses:

- Spinal cord injury
- Renal disease
- MS
- Huntington's disease
- HIV/AIDS
- Peptic ulcer disease
- Systematic lupus erythematosis

It could be hypothesised that individuals who live into old age with such conditions have learned to cope with their illness over the years. Indeed research has demonstrated the psychological capacity of older people to accept and adjust to health-related loss (Borchelt *et al.,* 1999). Valliant and Mukamal (2001) also highlighted that even among the oldest-old (i.e. above 85 years of age) there is a significant discrepancy between objective health status and subjective evaluations; despite being diagnosed as chronically ill, older people do not view themselves as "sick".

There are some medical conditions, however, that do appear to be related to an increased risk of suicide in older people, such as prostate cancer (Llorente *et al.*, 2005). Llorente *et al.* also found a statistically significant relationship between clinical depression and suicide rates. Therefore, it could be hypothesised that the crucial risk factor for suicide is the development of a depressive disorder as a result of ill health, rather than the physical illness per se.

Research seems to indicate a relationship between terminal illness and suicide rates (Brown *et al.,* 1986). According to Brown *et al.* approximately 25% of patients who are terminally ill have suicidal thoughts or a "wish to die". It is difficult to generalise these findings, however, due to methodological limitations. For example, all of the participants within the study had clinical levels of depression, and therefore it is unclear whether having a terminal illness precipitated suicidal ideation or whether these individuals had depression prior to becoming unwell. Furthermore, wishing for an early death does not necessarily equate with wanting to end one's life (Chochinov *et al.,* 1995). Chochinov *et al.* explored the rates of suicidal ideation in a population of 200 in-patients with a terminal

illness. They reported that 44% of participants wished for an early death whereas only 8.5% had active suicidal thoughts. Depression was once again strongly correlated with suicidal intent.

1.6.1.2 Functional Impairment

Conwell *et al.* (2000) considered functional impairment as a result of physical illness and its relationship with suicide. They argued that older people with functional impairment were more likely to end their life than matched controls. After controlling for mood disorders however, there was no longer a significant difference - participants who had chronic conditions with functional difficulties still rated themselves as ageing successfully. This further highlights the important role of mood disorder in completed suicide for older people.

There does not appear to be a strong relationship between dementia and suicide. Waern *et al.* (2002) compared suicide rates among controls and older people at different stages of dementia and found no significant differences. It could be hypothesised that the risk of suicide is higher during early onset of the disease while an individual still has insight and the ability to act on suicidal ideation. Research evidence for this clinical hypothesis, however, is lacking.

1.6.2 Social

1.6.2.1 Stressful life events

In reviewing the research there appears to be a significant difference between age groups with regards to social factors and suicide. Suicide in young people and middle age tends to be associated with stressful life events including conflict in interpersonal relationships, work-related difficulties and financial hardship (Hawton, 2005; Moscicki, 1997). These factors may be less of a risk for older people as emotional maturation and additional life experience promotes better adaptive coping styles to deal with such problems (Baltes & Smith, 2003). Furthermore, older people have an enhanced capacity to nurture fewer, but more rewarding relationships (Lang, 2001).

Social risk factors in older people tend to be related to loss (particularly bereavement), and social isolation (Pearson & Brown, 2000, Cattell, 1988). This is particularly pertinent as older people can experience a number of losses within a relatively short time period from retirement, moving into residential care and loss of physical health to name a few. Bereavement following the death of a spouse is a particular risk factor for older men (O'Connell *et al.*, 2004).

2.6.2.2 Deprivation

Brock *et al.* (2006) demonstrated a correlation between suicide rates and indices of deprivation where those living in deprived communities are most at risk of suicide. According to Lindesay (1991), it is not poverty per se that increases the risk of suicide in older people, but rather experiencing financial hardship for the first time in later life. He draws reference to the low rates of suicide within the most disadvantaged older age groups who have experienced adversity throughout their lives. It could be argued that those groups of people are more resilient when exposed to financial hardship in later life as they have developed the resources to cope with such difficulties from previous experiences.

2.6.2.3 Access to means

Access to means of suicide has also been highlighted as a risk factor for suicide in all age groups. According to Harwood *et al.* (2000) hanging is the most common method used in older males, with carbon monoxide poisoning coming 2nd (36% and 14% of suicides respectively), while drug overdose is the most common method of completed suicide in older women.

1.6.3 Psychological

1.6.3.1 Mental Illness

Depression is the main risk factor associated with suicide in older people (Conwell *et al.*, 2002; Waern *et al.*, 2002). Conwell *et al.* conducted an extensive review of psychological autopsy studies and reported that 71-95% cases of completed suicide in older people had

an underlying psychiatric illness, most commonly a depressive disorder. A similar finding was reported by Ross *et al.* (1990) following a prospective study exploring the psychological symptoms and behaviours expressed by older people prior to a suicide attempt. The study monitored the psychological wellbeing of 12,000 retired community residents over a 5-year period. During this time period 19 of the residents had completed suicide. The research indicated that residents with the greatest amount and intensity of depressive symptoms were 23 times more likely to commit suicide compared with asymptomatic residents.

It is important to note that not all older people with depression will have suicidal thoughts or indeed attempt suicide (Pearson & Brown, 2000). Pearson and Brown propose that it is the link between depression and hopelessness that enhances the risk of suicidal intent. Nevertheless depression is a major risk factor within this population and should be considered a high priority for intervention, particularly within primary care.

1.6.3.2 Previous attempts

According to Hawton (2005) previous suicide attempts or deliberate acts of self-harm are strongly correlated with completed suicides. This is supported by research which postulates that approximately 53% of older people who had taken their lives had a history of attempted suicide (Beautrais, 2002). Beautrais argues that an older person who has made one or more suicide attempt is 36 times more likely to complete suicide than matched controls.

1.6.3.3 Alcohol and drug misuse

Alcohol abuse is a risk factor for suicide in all age groups (Hawton, 2005). Approximately a quarter of older people who completed suicide have alcohol in their blood at post-mortem (Harwood *et al.*, 2000). It is hypothesised that the effect of alcohol provides courage to carryout the act. Furthermore, alcohol may interact with other drugs an individual may have taken (whether legal or illegal drugs) therefore enhancing the lethality of the act. Alcohol has also been shown to increase an individual's risk towards depression (Saunders *et al.,* 1991).

1.6.4 Mediating Role of Psychological Variables

Research suggests that certain psychological variables can result in an older person being more vulnerable to developing suicidality when exposed to the risk factors outlined above (Bonnewyn, Shah & Demyttenaere, 2009). Certain personality traits have been shown to positively correlate with suicidal ideation. For example, Useda *et al.* (2007) compared older people who had attempted suicide with actual completed attempts and found that the latter group scored higher on Neuroticism, as defined by the Five Factor Model of personality proposed by McCrae and Costa (1997).

Other psychological variables that may mediate the experience of suicidality in older people include maladaptive coping styles, such as thought suppression (Lynch *et al.*, 2004), poor problem solving ability (Gibbs *et al.*, 2009), and the expression of hostility (Scocco *et al.,* 2001). The concept of hopelessness has also been identified as a significant predictor of suicidal ideation in older people (MacLeod, Williams & Linehan, 1992; Pearson & Brown, 2000; Szanto, *et al.,* 2001; Vannoy *et al.,* 2007). According to MacLeod *et al.,* although depression is the predominant risk factor for suicide in older people, it is the presence of hopelessness that underpins suicidal intent, as previously discussed.

1.6.5 Section Summary

In summary, suicide in older people is complex with multiple, interrelated risk factors. Reviewing the research indicates that the risks must be viewed within the context of psychological, social and environmental factors in order to begin to understand who is at risk. Understanding and being aware of these risks are crucial when considering prevention and interventions to tackle the problem of suicide in older people, particularly as most, if not all, risk factors are amenable to intervention.

1.7 Preventing Suicide in Older People

According to a report from the UK Inquiry into Mental Health and Well-Being in Later Life (2007) preventing suicide in older people requires a multi-level approach from individual interactions to a population wide, public health approach.

1.7.1 Public Health Approach to Reducing Suicide Rates

With regards to public health interventions, the most successful approach to reducing suicide on a population wide level is removing access to means. For example, there was a significant reduction in suicide rates following the detoxification of domestic gas in the United Kingdom (Lindesay, 1991). A similar pattern has been noted in certain states in America. According to Kaplan, Adamek and Johnson (1994) approximately 80% of suicides in the USA are carried out by firearms. Research suggests that banning handguns within these states results in a significant reduction in the overall rates of suicide (Kaplan *et al.,* 1994; Lester & Leenaars, 1993; Loftin *et al.*, 1991).

1.7.2 Suicide Prevention at an Individual Level

There is a dearth of studies exploring the efficacy of treatments for suicidality in older people (Bonnewyn, Shah & Demyttenaere, 2009). According to Woods (2008), Cognitive Behavioural Therapy (CBT)[3] used to treat suicide in young people can also be applied to older age groups. It could be hypothesised that the mediating psychological variables, outlined in Section 1.6.4, may be amenable to a cognitive behavioural approach in order to reduce the risk of suicide within this population. For example, dysfunctional negative assumptions in relation to "hopelessness", which provides the link between depression and suicidal intent, could be challenged and modified (e.g. De Vries and Gallagher-Thompson, 1994). Further research is required before concluding on the efficacy of such an approach.

[3] CBT was developed by Beck and his colleagues (Beck *et al.*, 1979). The model looks to identify and modify dysfunctional negative automatic thoughts, core beliefs, and behaviours that perpetuate a depressive disorder.

There has been an increasing interest in the use of Interpersonal Psychotherapy (IPT)[4] in the treatment of late-life depression and suicidal ideation. The efficacy of IPT for depression in younger and middle-aged adults has been demonstrated (Elkin *et al.,* 1989; Luty *et al.,* 2007). It has been hypothesised that IPT would be particularly useful for older adults given the greater opportunity for experiencing interpersonal events (Hinrichsen, 2009).

Bruce *et al.* (2004) conducted a large multi-site study (Prevention of Suicide in Primary Care Elderly: Collaborative Trial) exploring the treatment of late-life depression in primary care patients. They found that participants treated with antidepressant medication, IPT, or a combination of both reported lower rates of suicidal ideation and depressive symptoms compared with participants who received "usual care". Furthermore, severity of depression did not impact on the intervention's effectiveness in reducing suicidal ideation suggesting that it could be used as a preventative strategy for older people presenting with suicide risk factors. However, the study design did not allow differentiation between the various treatment conditions, making it difficult to conclude the efficacy of IPT as a stand-alone treatment (Hinrichsen, 2009).

The lack of empirical research regarding the treatment of suicidality in older people is in part compensated by the growing evidence-base for the treatment of late-life depression, particularly given the strong relationship between depressive disorder and suicidal ideation (O'Connell *et al.*, 2004; Vannoy *et al.,* 2007). Indeed, O'Connell *et al.* predict that approximately 74% of suicides in older people could be prevented if underlying mood disorders were "eliminated".

1.7.2.1 Evidence-base for Treating Late-life Depression

There is an increasing evidence-base demonstrating the efficacy of both pharmacological and psychotherapy treatments for late-life depression (Gerson *et al.,* 1999; Scogin &

[4] IPT was developed by Klerman, Weissman and their colleagues (Klerman *et al.*, 1984) and has recently been modified for late-life depression (Hinrichsen and Clougherty 2006). The model formulates the development and maintenance of a depressive disorder in terms of inter-personal events (such as interpersonal disputes/conflicts, role transitions, bereavement and interpersonal deficits). The goal of treatment is to modify these events.

McElreath, 1994; Scogin *et al.,* 2005). Recent research for both interventions shall now be considered.

Pharmacological Interventions

The research indicates that anti-depressant medication, including tricyclic anti-depressants and serotonin-reuptake inhibitors, can improve symptoms of depression (Gerson *et al.,* 1999; Mottram, Wilson & Stroble, 2009; Mukai & Tampi, 2009; Scogin *et al.,* 2005). Adherence to a medication programme, however, can be problematic within older populations (Maidment, Livingstin & Katona, 2002; Unutzer *et al.*, 1999). For example, Maidment *et al.* reported that older people are often fearful of perceived side-effects of anti-depressant medication and are therefore reluctant to take such medication.

Problems associated with poly-pharmacy in older people also require serious consideration when prescribing anti-depressant medication, particularly as individuals over the age of 75 years take on average six different types of medication (Allard *et al.*, 2001). The consequence of this is a higher likelihood of drug interaction and toxicity compounded by normal age related physiological changes (British Medical Association & Pharmaceutical Society of Great Britain, 2009). It could be argued that psychotherapy is a more appropriate intervention for late-life depression given such risks. Furthermore, research suggests that psychological interventions are at least as effective as medication, even for severe cases of depression (Gerson *et al.,* 1999).

Psychotherapeutic Interventions

Meta-analyses of psychotherapeutic interventions for late-life depression have consistently demonstrated that all forms of psychotherapy are significantly better than no treatment (e.g. Gerson *et al.*, 1999; Scogin & McElreath, 1994). The research is limited, however, when comparing treatment models. Furthermore, the methodological quality of the studies included in meta-analyses has been questioned. For example, both of the aforementioned studies included research that did not necessarily have random allocation of participants. According to Higgins and Green (2009) randomly allocating participants to treatment conditions is essential when exploring the efficacy of treatment models; otherwise it is not possible to conclude which intervention produced the most favourable treatment effect.

Cuijpers *et al.* (2006) attempted to address previous methodological limitations inherent in earlier meta-analyses by only including randomised controlled trials in their analysis. Despite more stringent inclusion criteria, the findings confirmed the results of previous research - psychological interventions are effective for late-life depression, regardless of treatment modality. Of particular note was the finding that the overall effect size (0.72) was comparable to that found from a meta-analysis of psychological interventions for depression in younger age groups.

Laidlaw (2001) conducted a useful empirical review of the literature for the treatment of late-life depression and discovered that the most extensively researched psychological approach for late-life depression is CBT. He concluded that although all psychological interventions are effective, CBT produces the largest effect size compared with other treatment modalities, including psychodynamic psychotherapy and problem solving techniques. This is supported by studies exploring the effectiveness of psychological models for younger age groups (e.g. Conradi *et al.,* 2008; Gloaguen *et al.,* 1998; Hensley *et al.,* 2004). Furthermore, recent research comparing the effectiveness of CBT with IPT found that although overall both treatments were equally effective in reducing symptoms of depression, CBT was more effective for severe depression (Luty *et al.,* 2007). Research directly comparing the two models for late-life depression, however, is currently lacking.

1.7.3 Access to Treatment

Despite the availability of efficacious treatments for late-life depression, older adults are seldom offered appropriate treatment or referred on to specialist mental health services (Unutzer, 2002). Reasons why older people do not receive appropriate psychological intervention may be related to negative attitudes regarding the "understandability" of late-life depression (Murray *et al.,* 2006) and the usefulness of a psychological approach for older people in distress (Duberstein *et al.,* 1995; Rothera, Jones & Gordon, 2002). These themes will be explored in greater detail later in the chapter.

Furthermore, research suggests that having access to treatment may be a protective factor against repeated suicide attempts in older people (Chelsey & Loring-McNulty, 2003). As part of a qualitative study, older people with active suicidal ideation were asked what had

prevented them from succeeding in a suicide attempt - 49% reported that it was due to the intervention of another person (including family or professional). When asked what prevented future attempts, 14% said health professional intervention. This highlights the importance of GPs identifying individuals at risk of suicide and responding to that risk.

1.7.4 The Role of Primary Care in Preventing Suicide in Older People

The majority of older people experiencing mental health difficulties are not referred to specialist services but rather treated within primary care settings (Godfrey, 2005), as previously stated. Research suggests that older people themselves prefer to be under the care of their general practitioner when experiencing mental health difficulties than a mental health practitioner (Waxman, Carner & Blum, 1983). Waxman *et al.* reported that older people believe GPs provide the most effective care for psychiatric conditions. It could be hypothesised that such beliefs stem from the stigma of mental illness within society and older people's desire not to be referred to psychiatric services as a result of this stigma (Quinn *et al.,* 2009). It may also be the case that older people feel more comfortable with a family practitioner who they know and trust.

Research suggests that 70% of individuals who completed suicide visited their GP within a month of their death (Vassilas & Morgan, 1993). This figure is slightly higher when considering older people (Isometsca, Heikkinen & Marttunen, 1995). Despite that fact that older people visit their GP more often than their younger counterparts, depressive symptoms and suicidal ideations are often unrecognised and thus untreated (Blanchard, Waterreus & Mann, 1994; Crawford *et al.*, 1998). A lack of identification may act as a risk factor for completed suicide within this population as difficulties become more entrenched and severe (Pompili *et al.*, 2005).

According to Isometsca *et al. (1995)*, older people are less likely to overtly discuss low mood or suicidal intent due to the stigma of mental illness making the detection of psychological distress difficult. This is compounded by research that suggests attitudes towards mental health and the ageing process within primary care negatively impacts on practitioners' ability to identify suicide risk in older people and act accordingly (e.g.

Murray *et al.,* 2006). The remainder of this chapter will attempt to explore this relationship in greater detail.

Firstly it is important to provide a general overview of how attitudes develop. Following this a discussion will be presented concerning societal norms relating to attitudes towards older people generally and more specifically those experiencing mental health difficulties. How such attitudes influence health seeking behaviour and health care provision will be demonstrated. Finally, the role of attitudes towards suicide prevention in older people within primary care will be discussed followed by gaps in current research and the aims of the present study.

1.8 Defining "Attitudes"

Arguably the concept of "attitude" is difficult to define, as it has acquired differing meanings among both theorists and lay people (McGuire, 1985). For example, Ajzen and Fishbein (1977) reviewed 200 studies and found more than 500 operational definitions of "attitude" with 70% of the studies utilising more than one definition.

It is generally agreed, however, that attitudes can be broadly defined as consisting of three components: cognition (what a person thinks about a given object), emotional (how a person feels towards that object), and behavioural (how that person responds to the object) (Aitken & Jellicoe, 1996). In general terms it describes how individuals make sense of their world.

According to Katz (1960) attitudes serve the following four functions:

1. **Knowledge Function:** An attitude can help provide structure in terms of relating a person's cognitions, feelings and behaviour. It helps classify information and enhances communication in terms of expressing likes and dislikes.
2. **Utilitarian Function:** Attitudes can be modified in order to "fit in" with other people in society allowing individuals to adjust to their social environment.

3. **Value-expressive function:** Attitudes can express a person's wider value base. In order to change behaviour it is necessary to consider the perceived implication of such change on the value base.
4. **Ego-Defensive Function:** An attitude is held as it helps protect a person's ego or self-image. This may be particularly relevant with regards to prejudice where a person holds a negative attitude about a particular group of people because they feel in some way threatened by that group.

Katz's functionalistic theory has received support from more recent research (e.g., Hullett & Boster, 2001; Shavitt, 1990; Watt *et al.*, 2007).

1.8.1 Attitude and Behaviour

The relationship between attitudes and behaviour has received particular consideration within research. According to Aronson, Wilson and Akert (1994) attitudes tend to endure throughout a person's life and can therefore predict how an individual may act in the future. Fishbein and Ajzen (1975) argue, however, that individuals can have negative attitudes towards an object, person or group of people while simultaneously behaving positively. Furthermore, despite having positive attitudes, individuals may conform to undesirable institutional norms. This provides support for Katz (1960) utilitarian function of attitudes where they can be adapted to adhere to norms within a given situation. Therefore, although attitudes may predict behaviour, they must also be viewed within a social context.

The Theory of Reasoned Action (TRA) was proposed by Ajzen and Fishbein (1980) in order to explain the link between attitudes and behaviour. They postulated that behaviour is determined by an individual's attitude towards a particular behaviour and subjective norms. An individual's attitude is determined by their "behavioural belief", which in turn is determined by the perceived outcome of this behaviour in terms of a cost/benefit analysis. Therefore, if a person perceives that their behaviour will result in a positive outcome, then they will hold more positive attitudes towards conducting the behaviour in question. With regards to subjective norms, if an individual perceives that other people

will hold positive attitudes about the behaviour, then they will be more likely to carry out that behaviour.

A potential criticism of the TRA model is that it does not address the impact of additional external factors that may influence behaviour that may be outwith the control of an individual. For example a general practitioner may not carry out a suicide risk assessment for all of his patients due to a perceived lack of time during an appointment. Consequently, Ajzen (1985) developed the Theory of Planned Behaviour (TPB) to include a third component - perceived control in carrying out the behaviour. Ajzen argued that even when individual attitudes and subjective norms are positive towards a given behaviour, if an individual believes they do not have the resources or opportunities required to carry out the behaviour, then they are unlikely to form the "behavioural intention" to carry out the behaviour. This third factor gains support from Bandura's (1986) theory of "self-efficacy" in which an individual with high perceived self-efficacy will be more likely to persist with challenging situations than those with low perceived self-efficacy.

TPB has also received support from research concerned with health behaviours and behaviour change and has been found to be a good predictor of behaviour (e.g. Connor, 1994; Quine, 1998). Furthermore, a number of studies have found attitude to be the most predictive of the variables (e.g. Povey, 2000; Ajzen, 1991). In conclusion it seems pertinent to explore individual attitudes and cultural norms in relation to ageing and mental health difficulties in order to promote attempts at suicide prevention within older populations (the "behavioural intention" of recent Scottish Government policy and NHS targets).

1.9 Attitudes towards Old Age

Cultural attitudes towards old age frequently shift dependent on social and cultural determinants. For example, Harris (1990) suggests that during the eighteenth and early nineteenth centuries in pre-industrialised cultures, such as Britain, older people acquired authority and influence through social position, religious beliefs, property rights, and were viewed as holders of cultural and other useful knowledge. In the nineteenth and twentieth

centuries Britain underwent rapid modernisation and industrialisation, during which time older people's status within society declined. Attitudes have become increasingly negative with older people being deemed an economical burden on society. This attitudinal change has resulted in older people becoming alienated as a social group and consequently more isolated (Philipson, 1982). At an individual level such isolation can compound the experience of mental ill health (Mentality, 2004).

Negative attitudes towards old age has been termed "ageism"; defined as stereotyping and discriminating against individuals or groups of individuals based on age (Butler, 1969). According to Butler (1975),

"ageism serves a highly personal objective, protecting younger (usually middle aged) individuals – often at high emotional cost from thinking about things they fear (ageing, illness, death)" (Butler, 1975, p.12).

This seems to relate to functionalistic theories of attitudes, particularly Katz (1960) ego-defence function, which argues that discrimination exists as a way to protect oneself from something that is feared. Furthermore, according to Laidlaw *et al.* (2007) old age is usually characterised as a period of significant loss for older individuals. It could therefore be hypothesised that the fear described by Butler is in response to this stereotype of ageing.

Kite *et al.* (2005) conducted a recent meta-analysis of 232 studies investigating age related attitudes and stereotypes within society. They found clear age-related stereotypes that differentiate between older and younger age groups. In particular, older people are often viewed as being less attractive and less competent when compared with younger age groups and were treated less favourably. Such negative stereotypes may be perpetuated by the media in their depiction of older people within fictional programs. According to Donlon, Ashman & Levy (2005), older characters in television shows are more likely to provide comic value with regards to mental or physical incompetence than younger characters.

Age discrimination and negative stereotypes can adversely impact on older people's well-being and mental health (Levy, 2003; UK Inquiry into Mental Health and Well-being in Later Life, 2007). According to Levy (2003), older people can internalise negative stereotypes regarding old age where loss and suffering are regarded as the norm and an

inevitable consequence of growing old. Older people who hold such negative expectations are therefore less likely to seek help and support for psychological distress creating a self-fulfilling prophecy. These themes will be explored further below.

1.10 Attitudes towards Mental Illness in Older People

Empirical research indicates that stigma and negative attitudes towards mental illness is evident in both younger and older adults (Department of Health, 2009; Brockington *et al.,* 1993, Scottish Executive, 2004; Quinn *et al.,* 2009). According to Sartorious (2003) these attitudes are compounded for older people as a result of double stigmatisation based on general age related misconceptions.

1.10.1 "Understandable" Distress

In Western Society, depression and suicidal thought are often considered a normal reaction to the ageing process and thus viewed as understandable (O'Connell *et al.,* 2004; Sartorious, 2003). Indeed many older people themselves seem to hold this view (Pearson & Brown, 2000; Quinn et al, 2009; Uncapher & Arean, 2000). It could be hypothesised that these beliefs develop as a consequence of specific cohort effects and the stigma of mental illness. For example, older people who had lived through a world war valued bravery and stoicism while mental distress was viewed as a sign of weakness (Murray *et al.*, 2006). According to Robb *et al.* (2003) the perceived stigma of mental illness results in older people underplaying symptoms of mood disorders, regarding self-sufficiency as a virtue in managing psychological distress. Consequently, older people tend to avoid seeking help for mental health difficulties for fear of being viewed as morally weak.

The stigma of mental illness has been challenged over the last two decades with various national campaigns, such as the "See Me" initiative (www.seemescotland.org), and Scottish Government policies, including Delivering for Mental Health (2006) and Towards a Mentally Flourishing Scotland (2009). Therefore, as generations grow and age, there may be a shift in cohort attitudes towards mental illness with greater numbers of older people seeking help from mental health services. This would be expected to further reduce

mental health stigma. This is supported by recent research which demonstrates increasingly positive attitudes towards mental illness with greater similarities in perceptions between younger and older adults than previously thought (Segal *et al.,* 2005).

According to Kirby *et al.* (1997) the prevalence of suicidal thought in older people is approximately 4%, suggesting that such thoughts are not necessarily "normal" reactions to ageing. Indeed other studies place the prevalence of suicidal ideation as low as 1% (Crosby, Cheltenham & Sacks, 1999). However, it is important to be cautious when interpreting studies looking at suicidal ideation, as data are often gathered using self-reports, which may be prone to a response bias. For example, it could be argued that a participant's response to questions about suicide may reflect the types of attitudes inherent in our society towards old age and suicide generally rather than their own beliefs. This is supported by Ajzen's (1985) Theory of Planned Behaviour, which highlights the influence of subjective norms on behaviour, as previously discussed.

Moreover, studies tend to utilise different definitions of suicidal ideation from specific thoughts of suicide to more general thoughts of death. Also, different time frames are employed when asking participants to indicate the presence of suicidal ideation, anywhere from the past week to last two years. Although we must be cautious, the research does indicate that older people are less likely to have thoughts of death than would first appear.

1.10.2 The Tragedy of Suicide

Research indicates a greater ambivalence within society towards suicide in older people compared with younger age groups (Marks, 1989; Woods, 2008). According to Marks (1989) a completed suicide in a young person is often viewed as a greater tragedy than the suicide of an older person. This reinforces the devaluing of older people within our society, which in turn negatively impacts on health seeking behaviour. Consequently, mental health difficulties become more severe and entrenched, which increases the risk of suicide within this population, as previously discussed (Pompili *et al.*, 2005).

Beeston (2006) points to society's attitude towards old age as impacting negatively on health care services ability to address issues associated with suicide within this population.

He states, "Suicide in older people is reasonably well understood..... What still remains lacking in tackling this devastating problem is concerted and sustained action by each and every one of us to value, support and include older people in all aspects of life" (Beeston, 2006, P.4). Therefore, the impact of societal attitudes on the provision of mental health services shall now be reviewed.

1.11 Attitudes towards Ageing and Mental Illness within the National Health Service

According to the UK Inquiry into Mental Health and Well-Being in Later Life (2007) age discrimination is "entrenched" in mental health services. Despite comparable prevalence rates of mental illness among both older and younger age groups (Futterman *et al.,* 1995; Vaillant & Mukamai, 2001), there seems to be an inadequate provision of psychological therapies for older populations. For example, currently in Scotland there is one whole time equivalent clinical and applied psychologist per 8,758 of the population for those under the age of 20 and 8,643 for those between the ages of 20 and 64 years old. This is in contrast to those over the age of 65 years of age where there is only one whole time equivalent for 26,568 of the population (NHS Education for Scotland & Information Services Division, 2009).

Currently in Scotland general adult services are provided for individuals under the age of 65 years. After this age individuals are referred to older adult services. It could be argued that having an age barrier to services disadvantages all age groups. For example, individuals under the age of 65 years may experience mental health difficulties traditionally associated with older people (such as young onset dementia, bereavement, loss of role, physical ill health) and may benefit from the specialist skills of an older adult service. Similarly older people may be experiencing difficulties that could be supported and addressed within mainstream services which, as has been previously demonstrated, are better resourced in terms of psychological services. Consequently services could be based on need rather than age.

Although offering an obvious insight into the mental health needs of older people and suggestions for service development, older people's views are often poorly represented in policy, service development or in research (Godfrey, 2005). Indeed, a literature review

into suicide produces a plethora of research looking at suicide behaviour in young people with a small number of studies concerning older people.

Older people themselves acknowledge a general pessimism in relation to mental health in old age, both within society as a whole and within mental health services (Langmead, 2006). Langmead conducted qualitative research exploring the views of older people with regards to their experience of mental health problems. Participants in the study stated that their concerns are often dismissed or underplayed by health service practitioners. One older patient commented:

"I feel I am being treated differently because of my age. It feels like I am invisible now and I think sometimes I don't get offered services because I am old", (Langmead, 2006).

Research supports this notion that practitioners "underplay" mental illness in older people with it being seen as normal part of the ageing process (Crawford *et al.,* 1998; Murray *et al.,* 2006).

1.11.1 Attitudes among Primary Care Practitioners

According to Murray *et al.* (2006), GPs avoid medicalising "understandable" distress as a result of problems associated with old age, and therefore clinical depression in older people may not be acknowledged or treated appropriately. Crawford *et al.* (1998) reviewed older patients' medical records and reported that only half of these patients had clinical levels of depression identified. Furthermore, only 38% of those recognised as having depression received treatment or a referral onto mental health services. This is supported by Garner (2003) who found that people over the age of 65 years are less likely to be referred to clinical psychology compared with younger people with similar problems.

Research indicates that physicians tend to view mental ill health in younger people as more amenable to intervention than similar difficulties in older people (Duberstein *et al.,* 1995; Rothera, Jones & Gordon, 2002; Uncapher & Arean, 2000). This is despite research indicating that older people who receive appropriate psychological support are able to lead full and meaningful lives (Valliant & Mukamai, 2001).

Uncapher and Arean (2000) utilised a between subjects design where 215 primary care physicians were given one of two case vignettes describing a suicidal patient with medical problems: one aged 38 years the other 78 years old. Participants were also given a self-rated questionnaire (the Suicidal Patient Treatment Scale) to explore participant's attitudes towards treating suicidal ideation in a depressed patient. With regards to the case vignettes, 99% of physicians accurately recognised depression while 94% correctly identified the presence of suicidal ideation. Furthermore, the success rate of identifying depression and suicide was equal for both younger and older case vignette. Participants were less likely to conclude, however, that suicidal ideation in the older person was a serious condition that required treatment. It could therefore be hypothesised that a lack of response within primary care to late-life depression is more problematic than a lack of detection.

It could be postulated that ageist attitudes concerning the understandability of distress in old age will increase towards the oldest-old given that with increasing age comes greater physical decline and further opportunity to experience negative life events (Baltes & Smith, 2003). This is supported by research which indicates that ageist perceptions of physicians working within primary care are more prevalent when considering older people above the age of 85 years and those in care homes (Gunderson *et al.,* 2005). However, the generalisability of these findings to the UK are questionable given the relatively low response rate (116 practising family practitioners) and the fact that the participants were from a rural town in Florida, USA.

1.11.2 Attitudes among Clinical Psychologists

It must be noted that so called "ageist" attitudes are not confined to primary care practice. Research suggests that clinical psychologists predict a poorer outcome for older patients with suicidal ideation and therefore view them as less appropriate for psychological intervention (James & Haley, 1995). The research does not indicate whether such beliefs impact on a practitioner's ability to recognise or to treat suicidal ideation. This is particularly pertinent as arguably individuals can hold negative attitudes towards other people or situations, but behave positively towards either (Fishbein & Ajzen, 1975), as

previously discussed. Furthermore, the belief that younger people are more likely to benefit from treatment may be influenced by the fact that the majority of clinical psychologists will rarely be in contact with older clients, particularly those who are suicidal, due to the low numbers specialising within this client group. Therefore, their attitudes may be skewed due to this lack of experience.

1.12 Perceived Control in Responding to Older People in Distress

The discussions relating to Ajzen (1985) Theory of Planned Behaviour in Section 1.7.1 highlighted the need to consider 3 factors that may influence the behavioural expression of attitudes. The influence of individual attitudes and subjective norms on assessing for and treating depression and suicidal ideation in older people has been demonstrated. Ajzen's third component, perceived control in carrying out the behaviour, will now be considered in relation to primary care practitioners' ability to respond to psychological distress in older people.

1.12.1 Perceived Ability

Research suggests that primary care practitioners lack confidence in their ability to diagnose depression and are unsure as to the efficacy of treatment of depression in older people (Callahan, Dittus & Tierney, 1996; Rothera, Jones & Gordon, 2002). This is particularly true for older GPs (Secouler, 1998; Rothera, Jones & Gordon, 2002). According to Secouler (1998) older GPs may identify with older patients and therefore find addressing such difficulties more problematic. In contrast, GPs with prior experience in psychiatry or who have had training in mental illness in old age are more confident in treating late-life depression (Collins, Katona & Orrell, 1995; Rothera *et al.,* 2002).

According to Fazio (1990), attitudes that are readily accessible from memory or which hold greater personal relevance are more likely to affect behaviour. Therefore an individual is more likely to give careful consideration to a matter if it is personally significant to them. It could therefore be hypothesised that older GPs and those who have experienced suicide in an older person would hold different attitudes towards suicide

prevention within this population than younger GPs with no such experience. Research for this clinical hypothesis is currently lacking.

A meta-analytic review by Kite *et al.* (2005) highlighted a preponderance of evidence that suggests older people have more positive attitudes to ageing than their younger counterparts. However, there is limited research exploring age related difference in attitudes towards mental illness in old age and none looking specifically at the relationship between age of primary care practitioners and attitude towards suicide prevention. Based on the findings of Kite *et al.* (2005) we may expect older GPs to be more positively disposed to recognising the need for, and a willingness to address, suicide prevention within older age groups.

1.12.2 Knowledge of the Issues Related to Suicide in Older People

According to Bruce *et al.* (2004) there is a gap between physicians' knowledge and practice with regards to suicide in older people. This is supported by research into attitudes and clinical practice of GPs with regard to depression. For example, Rothera *et al,* (2002) surveyed 330 practising GPs in Nottingham on their views regarding late-life depression and its management. Approximately three-quarters of participants surveyed reported difficulties in treating depression in older people, while over half stated that they required further training in this area.

Training general practitioners to assess and treat depression within this client group can help address the gap between knowledge and practice, which in turn has a positive effect in reducing suicide rates (Rutz *et al.*, 1989). However, as discussed in Section 1.9.2.1, practitioners are less likely to assess for and treat depression in older people as it is viewed as an "understandable" reaction to ageing and therefore not amenable to intervention. Such attitudes may also result in the same practitioners being reluctant to participate in training related to suicide prevention in older people.

1.13 Attitudes towards Suicide Prevention in Older People

There is a paucity of research looking specifically at attitudes of primary care practitioners to suicide prevention in older people. One study has looked at attitudes across front-line staff with regard to suicide prevention within the general population (Herron *et al.,* 2001).

Herron et al developed a standardised questionnaire concerned with attitudes towards suicide prevention in frontline staff, including psychiatrists in training, community psychiatric nurses, general practitioners and accident emergency staff. They found significant differences among these staff groups with regard to attitudes towards suicide prevention where those working specifically within mental health had more positive attitudes towards suicide prevention while GPs tended to have more negative attitudes. Of significant note was that GPs were more likely to hold negative attitudes towards statements around being responsible for and doing more about suicide prevention compared with other frontline staff groups. Furthermore, there seemed to be a belief among the GP participants that suicide attempts were a "ploy for attention". Such beliefs may result in the underestimation of risk in suicidal patients and therefore GPs may be less likely to conduct risk assessments. This is supported by research that suggests the specificity and strength of an attitude are positively correlated with subsequent behaviour (Rathus, 1990).

Herron *et al.* did not consider whether attitudes towards suicide prevention impacted on clinical practice. This is particularly pertinent as holding a negative attitude about a specific situation does not necessarily mean you will behave in a negative manner towards that situation (Fishbein & Ajzen, 1975). Furthermore, the Attitudes towards Suicide Prevention Scale did not allow for the expression of attitudes towards suicide within certain age groups. Research would suggest that suicide in a younger person is viewed as more tragic than suicide in an older person (Marks, 1989). Therefore, it may be postulated that the negative attitudes towards suicide expressed by GPs in the study may be compounded by attitudes towards old age generally.

Indeed, to date, there have been no research studies exploring GPs' attitudes towards suicide prevention in older people and the impact of these attitudes on clinical practice with this client group. This is despite the fact that they are in an ideal position to be able to

recognise and treat depression and suicidal ideation in older people and are often the first point of contact when an older person experiences distress.

1.14 Aims and Hypotheses of Present Study

The aim of the present study is to explore how General Practitioners' perceive their role with regards to reducing suicide rates within older age groups, against a backdrop of national policy focusing on primary care as an arena for intervention. As part of this, GPs attitudes towards suicide prevention as well as their self-reported clinical practice behaviour will be investigated in order to explore a potential relationship. It is hoped that the study will promote a better understanding of GPs' needs in terms of future training and support with regard to assessing for and preventing suicide in older people with a view to improving services for this population.

The main research questions are as follows:

1. What is the range of attitudes expressed by GPs with regard to suicide prevention in older people?
2. What experience do GPs have of suicide in older people?
3. Do these experiences affect their attitudes towards suicide prevention?
4. How do they perceive their role in terms of reducing suicide rates in older populations?
5. Do their attitudes affect self-reported clinical practice?
6. What additional factors influence the expression of attitudes and clinical practice?

In order to address the above research questions, the following hypotheses were formulated:

1. GPs' attitudes towards suicide prevention in older people will correlate with self-reported clinical practice in terms of risk assessment within this population.
2. There will be a difference in scores between GPs who have experienced suicide in older people compared with GPs with no such experience in

terms of attitudes towards suicide prevention and self-reported clinical practice within this client group.

3. GPs who have received training on suicide risk assessment will have more favourable attitudes towards suicide prevention in older people and will be more likely to conduct such assessments with this client group.
4. Older GPs will have more positive scores in terms of attitudes towards suicide prevention in older people compared with younger participants.

2. METHODS

The following chapter will provide a detailed account of the design and procedures adopted for the current study. A discussion will also be presented regarding potential challenges in conducting the research, particularly in relation to recruiting participants and ethical concerns, and how these challenges were addressed within the methodology of the study.

2.1 Participants

2.1.1 Inclusion Criteria

All General Practitioners (GPs) working within a Scottish health board area were included in the present study.

2.1.2 Exclusion Criteria

There were no exclusion criteria in order to avoid introducing potential selection bias and to ensure the findings are generalisable to all practicing GPs.

2.2 Sample Size and Power

According to Graziano and Raulin (2004) obtaining an adequate sample is the most crucial part of conducting a survey. It is not possible within the confines of the study to recruit all practising GPs within Scotland due to the size of the potential population (there are approximately 1,025 GP practices and 5,000 general practitioners across Scotland). Therefore the research focused on a sample of GPs within a single health board area, with the findings being generalised to the larger population.

Furthermore, it was felt that the sample adequately represented the population from which the findings are to be inferred. The health board selected has one of the largest numbers of practising GPs and serves both rural and urban populations.

For the purpose of statistical analysis, a power calculation was conducted in order to calculate the size of the sample required to detect a specified effect size.

2.2.1 Calculating Power

The term power refers to the sensitivity of the statistical procedure in accurately rejecting the null hypothesis when it is indeed false. It is necessary to calculate the number of participants required to ensure sufficient power. It is generally agreed that the larger the sample size, the higher the power level (Cohen, 1988).

Power G3 (Faul *et al.,* 2007), a stand-alone power analysis commonly used in psychological research, was utilised in order to calculate the required sample size to adequately address the research hypotheses. Prior to conducting the power calculation the following information is recorded: type of statistical test used; the significance level adopted; the expected effect size (small, medium or large); and the desired power value (a power value greater than 0.8 is generally regarded as an acceptable level).

2.2.1.1 Power and the Analysis of Correlation

An a priori power calculation was conducted to establish the size of sample required in order to explore a possible correlation between GPs' attitudes towards suicide prevention in older people and self-reported clinical practice. As there are no previous research studies exploring this relationship, it is not possible to state an expected effect size. Most psychological research results in a medium effect size (Cohen, 1988). With regards to statistical tests of correlation (namely Pearson's Correlation) a medium effect size is deemed to be a coefficient (r) of 0.3 (Cohen, 1992). Therefore, a medium effect size of 0.3 was selected on Power G3 with an alpha level of 0.05 and power value of 0.8. The sample size required to ensure this level of power was calculated to be 84 participants.

2.2.1.2 Power and Comparing Group Means

An a priori power calculation was conducted in order to establish the size of sample required when comparing group means using both an independent t-test and one-way ANOVA. Once again GPower 3 was utilised with an alpha level of 0.05, a medium effect

size (0.5), and an 80% power value. The sample size required for both statistical tests was 128 and 200 respectively.

2.2.1.3 Power and Analysing the Psychometric Properties of the Questionnaire

When calculating the sample size required in analysing the psychometric properties of a questionnaire, the minimum ratio of sample size (*N*) to the number of variables (*p*) should be calculated (MacCallum, Widaman, Zhang, & Hong, 1999). As a general rule of thumb a minimum of 10 participants will be required for each item on a questionnaire (Everitt 1975). In the present study the largest section under analysis is section 2 (Attitudes towards Suicide Prevention in Older People) which consists of 14 items. Therefore a sample size of 140 participants will be required to ensure adequate power.

2.3 Sample

GPs from a single health board area were recruited using simple random sampling. All GPs within the sample had an equal chance of participating, therefore minimising the potential for selection biases.

The health board area constituted a population of 800 GPs (358 males and 442 females) operating from 120 practices.

2.4 Design

The study used a within-subject, quantitative, questionnaire based design. Furthermore, a cross-sectional design was adopted where the questionnaire was administered once to all participants, therefore measuring the relevant features under consideration as they exist at the time of the study.

2.5 Procedure

Contact details of all GPs practising within the selected health board were gathered from the Information Services Division website (www.isdscotland.org). ISD is Scotland's main organisation for health information and statistics operating under NHS National Service Scotland. A database was set-up on Microsoft Excel in order to store the contact details of potential participants. Email addresses were also recorded as a group contact on the outlook email system.

Prior to making initial contact with the GPs, the researcher contacted all practice managers via email outlining the aims and purpose of the study and inviting managers to suggest strategies that may maximise participation in the study. The researcher also liaised with the Department of General Practice at the University of Edinburgh for support and advice in terms of recruiting GPs for the study.

Following initial contact with practice managers, an email was sent to all GPs working within the selected health board area informing them of the study and inviting participation. The email also included two attachments: a Participant Information Sheet and a copy of the questionnaire.

2.5.1 Development of the Participant Information Sheet

Research suggests that GPs are reluctant to take part in research if they have been given inadequate information about the study (McAvoy & Kaner, 1996). Both the information sheet and the initial email correspondence included a background to the study, what participation would involve and the various ways in which the questionnaire could be completed and returned to the researcher (refer to Appendix 1 &2). Contact details of an individual not directly connected with the research were also included to ensure potential participants could access impartial information regarding the study.

It was made clear in the information sheet that returning a completed questionnaire would be accepted as consenting to participation in the study.

2.6.2 Options for Completing and Returning the Questionnaire

The questionnaire was available either in a paper or electronic format. Participants were given three options for completing and returning the questionnaire:

1. Complete and submit an online version of the questionnaire.
2. Complete and return the questionnaire via email.
3. Complete and return a paper copy of the questionnaire.

With regards to option 1, a website was created by the researcher using the Bristol Surveys Online (BOS) tool (www.survey.bris.ac.uk). BOS is an online service that allows for the creation and management of questionnaires. The questionnaire is uploaded to a website with a unique URL created by the researcher. Participants can easily access and complete the questionnaire online by using the URL provided. The responses are then recorded onto a database which can be exported to other database packages, such as Microsoft Excel or the Statistical Package for Social Sciences (SPSS).

With regards to option 3, a paper copy of the questionnaire was posted to all general practitioners by internal mail two days after the initial email correspondence along with a copy of the information sheet and a self-addressed envelope, which could be used to return the questionnaire via internal mail. Two first class stamps were also included in the mailed out questionnaire as a thank you for taking part in the study. This is discussed further at section 2.6.4.1

2.6.3 Reminders

Participants received two reminders via email (see Appendix 3). The first reminder was sent out approximately 4 weeks following initial contact and included a deadline for returning completed questionnaires, which was set at 4 weeks from the reminder. A second reminder was sent a week before the deadline for responses.

Both emails thanked those who had already participated in the study and provided further information on how to complete the form online for those who had not yet taken part. The

email also included the anticipated time-scale for providing feedback with regards to the research findings in order to encourage participation (Whitfield, 1997).

Figure 2 provides a flowchart of the procedure, as discussed.

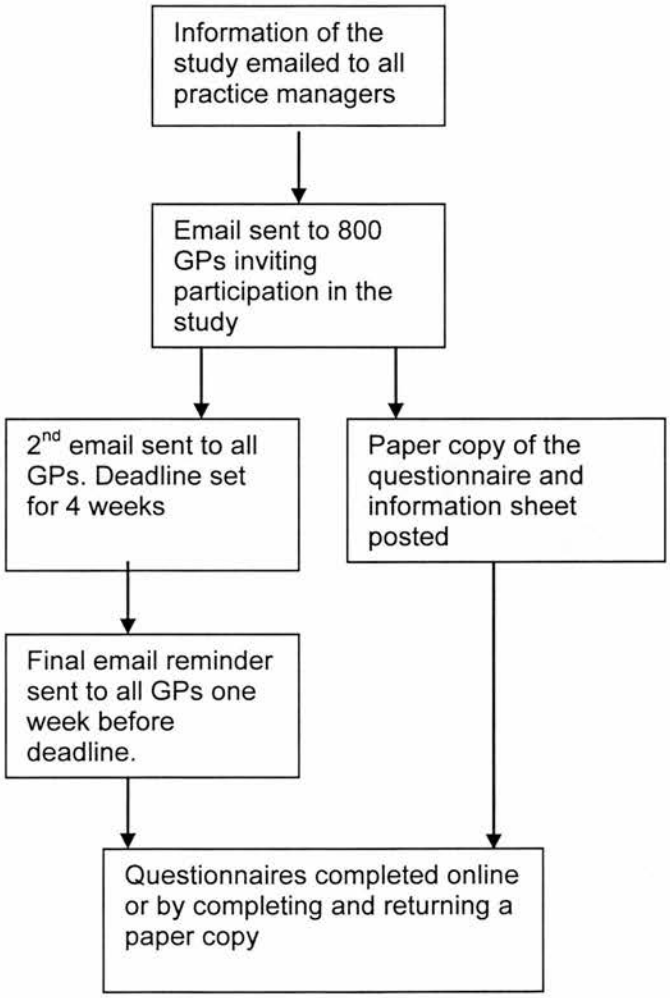

Figure 2: GP Participation and Data Collection: Procedural Flowchart

2.6.4 Enhancing Participation

It was anticipated that the recruitment of GPs may be difficult given the sensitive nature of the study and competing demands on their time. This is supported by research which estimates that physicians' response rates to questionnaires are approximately 10 percentage

points lower than non-physician participants (Beebe *et al.,* 2007). In an attempt to increase the return rates of questionnaires in the present study, a number of evidence-based approaches were utilised, which are discussed below.

2.6.4.1 Incentives

All participants were given two free first class stamps for their own personal use as a thank you for taking part in the study. This approach has been utilised by the British Psychology Society as a way to increase response rates with regard to postal questionnaires. Indeed research suggests that including a small financial incentive can significantly increase response rates as it promotes feelings of goodwill towards the study (Coogan & Rosenberg, 2004). Furthermore, rates have been shown to double when such incentives were not conditional on a response (Edwards *et al.,* 2002).

2.6.4.2 Options for Completing and Returning Questionnaires

Although more time-consuming for the researcher, three options were provided with regards to completing and returning the questionnaire, as discussed. Research demonstrates that providing a paper copy of a questionnaire along with a web option significantly increases response rates (Beebe *et al.,* 2007). Furthermore, Beebe *et al.* found that posting out a paper copy of a questionnaire following a web-based option reduced the response time, and therefore the overall time taken to collect data.

2.6.4.3 Designing the Participant Information Sheet

Research suggests that personalising correspondence, such as including a photograph of the researcher on the Participant Information Sheet or personally addressing letters, significantly increases response rates (Edwards *et al.,* 2002). All correspondence to potential participants within the present study included these suggestions in order to maximise recruitment potential.

General Practitioners are also less likely to participate in research if it is perceived to be of little relevance to their clinical practice (McAvoy & Kaner, 1996). Therefore, the information sheet drew reference to HEAT targets (a core set of objectives, targets and

measures set by the Scottish Government in relation to clinical practice and service provision within the NHS) specifically related to suicide prevention within primary care. The information sheet also provided opportunity to receive feedback on the findings of the study as research suggests that GPs are less likely to participate in research if they perceive that they will not receive such feedback (Whitfield, 1997).

2.7 Ethical Considerations

2.7.1 Confidentiality

Given the sensitive nature of the study, it was important to reassure participants that all data would be confidential and appropriately anonymised. The results of the study will not be available in any way that may identify individuals. Rather it will be a summary of overall group findings and trends observed in the data.

Contact information was sought from participants who requested feedback with regard to the findings of the study. However, these details were recorded in a separate database and were not connected with completed questionnaires.

Further information on data management can be seen in section 2.10.1.

2.7.2 Consent

It was made clear in the Information Sheet that returning completed questionnaires would be accepted as consenting to participation in the study. Potential participants were also informed that it would not be possible to withdraw from the study at a later date - responses to the questionnaire will be anonymised and therefore can not be identified in a way that would allow their removal from analysis.

2.7.3 Ethical Approval

Formal ethical approval was unconditionally granted from the National Research Ethics Service (NRES). The research also underwent the scrutiny of an internal ethics panel within the School of Health in Social Science. Management approval via the appropriate Research and Development Department was also sought and granted.

2.7.4 Ethical Dissemination of Results

The findings from the research have been written up as part of a doctoral thesis in Clinical Psychology. An executive summary of the study was also emailed to all General Practitioners working in the chosen health board. This was particularly pertinent as it is hoped that the findings will inform the development of future training for GPs with regards to suicide prevention in older people.

In order to ensure wider dissemination, the research will be submitted for publication in a peer reviewed academic journal. The findings will also be presented to a special interest group for psychologists specialising in older people's mental health.

2.8 Data Collection

A self-administered questionnaire was developed which explored attitudes towards suicide prevention in older people and self-reported clinical practice behaviour in terms of risk assessment with this population (see Appendix 4).

A brief introduction was presented at the beginning of the questionnaire outlining the purpose of the study along with a definition of "older people". The operational definition of "older people" was anyone over the age of 65 years. This figure is based on the upper cut-off age for accessing adult services in the selected health board area. It is also currently the age at which people can receive statutory pension entitlements in Scotland.

The questionnaire is then divided into 3 sections: Background Information, Attitudes towards Suicide Prevention in Older People, and Clinical Practice. Instructions on how to answer questions were clearly stated at the end of each question posed. The questions were standardised to ensure that the format of the questionnaire was the same for all participants. This allowed comparisons to be made across different groups. The questionnaire also used language appropriate to the population being studied. It was anticipated that the questionnaire would take no longer than 10 minutes to complete.

2.8.1 Background Information

Background information was gathered in the form of closed-ended questions in order to establish the demographic profile of the participants, including age, years in clinical practice, and level of training received in relation to older people psychiatry and suicide generally. In order to reduce the possibility of identifying individuals from their responses, the questionnaire asked participants to record their age within general age bands. Furthermore, participants were not asked to indicate gender.

This section also enquired about participants' experience of suicide in older people and whether they have had an older patient commit suicide. They were also asked to rate how often they experience suicidal ideation behaviours in older patients.

2.8.2 Attitudes towards Suicide Prevention

The questions relating to attitudes towards suicide prevention were based on the "Attitudes to Suicide Prevention Scale" developed by Herron *et al.* (2001), which has established psychometric qualities. The original questionnaire can be seen in Appendix 5.

The scale was developed following a series of semi-structured interviews with 36 frontline health professionals, including general practitioners. The interviews produced a pool of 28 items regarding attitudes to suicide prevention, which were then assessed for internal consistency using factor analysis. Responses from 80 psychiatrists in training were analysed using principal component analysis with varimax rotation. Items with a factor

loading of 0.5 or above were retained - 14 items met this criterion. These 14 items were collectively termed the Attitudes to Suicide Prevention Scale (ATSP).

The ATSP has demonstrated high internal reliability, as indicated by a Cronbach's Alpha score of 0.77 (Bland & Altman, 1997), and good test-retest reliability with a correlation coefficient of 0.85 (Herron *et al.,* 2001). It has also been cited in a number of studies since its development (e.g. Brunero *et al.,* 2008; Gask, *et al.,* 2006; Pompili *et al.,* 2005).

2.8.2.1 Amendments to the Original Questionnaire

The original questionnaire was used to survey opinion on suicide prevention for all populations, whereas the present study looked to focus on older people. Therefore the questions were amended to focus on attitudes to suicide prevention in older people. Permission was sought from Professor Appleby with regard to using the questionnaire and making these amendments.

Questions 10 and 11 were excluded from the original questionnaire ("Since unemployment and poverty are the main cause of suicide, there is little that an individual can do to prevent it" and "I don't feel comfortable assessing someone for suicide risk"). The literature suggested that Question 10 did not reflect suicide risk within an older person population and therefore was not included. With regards to question 11 it was felt this item would be better addressed in the section concerning self-reported clinical practice behaviour. Similarly, question 14 was presented as a stand-alone item rather than included as part of the scale.

Three additional questions were added which asked participants to rate how much they agree with the following statements:

- "Young people are more likely to commit suicide than older people"
- "Suicide in older people is understandable"
- "Suicide prevention would be more successful with younger people than older people"

These questions were selected in order to explore possible age bias in responses, as has been highlighted in previous research.

Therefore the current questionnaire consisted of 14 items related to attitudes towards suicide prevention in older people.

A 5-point Likert scale was utilised where the available responses to the question are arranged on a continuum with extreme positions at the end points, with 1 being "strongly disagree" and 5 being "strongly agree". Question 9d was phrased so that a "strongly agree" response indicated a positive attitude in order to avoid response set.

Participants were also asked to indicate the percentage of suicides in older people they believe to be preventable.

2.8.2.2 Scoring

For the purpose of scoring Section 2 of the questionnaire, a strongly positive attitude was scored as 1 while a strongly negative attitude was scored as 5. Therefore question 9d was reverse scored where a strongly positive response was scored as 5. The total score was the sum of the scores on each item. Therefore, higher scores indicated more negative attitudes towards suicide prevention in older people.

2.8.3 Self-Reported Clinical Practice

The final section of the questionnaire looked to survey GPs self-reported clinical practice in terms of risk assessment for suicide in older people. It consists of 8 items addressing issues such as competing demands on time, confidence in assessing for suicide risk in older people, and possible reasons for not completing a risk assessment with this client group. In order to avoid a response set, question 11d ("I feel comfortable assessing suicide risk in older people") was phrased positively compared with the other items within this section.

2.8.3.1 Scoring

Again a 5 point Likert scale was adopted and participants were asked to rate how strongly they agreed with a given statement, where 1 indicated that they "strongly disagree" to 5 indicating "strongly agree". The total score was the sum of scores for each item. Lower

scores indicated more proactive clinical practice in terms of assessing for suicide in older people. Therefore, question 11d was reversed scored.

2.9 Pilot Study

The first draft of the questionnaire was piloted by 5 GPs, who were recruited via the co-ordinator for research within general practice and had a clinical interest in older peoples' mental health. The questionnaire was emailed to the GPs along with a comment sheet. They were asked to comment on a number of areas, including length of time taken to complete the questionnaire, content, clarity of the questions, and relevance to clinical practice. There was also an option for further comments. All of these factors have been shown to affect whether or not a GP participates in research (McAvoy & Kaner, 1996).

Feedback indicated that the questionnaire was generally acceptable to all GPs who participated in the pilot. In particular they found it easy to understand and complete. They also found it sufficiently short and quick to complete, which was highlighted as an advantage in terms of asking GPs to participate in the study. There were no specific changes suggested and therefore the questionnaire for the pilot remained the same for the main substantive study. As there were no changes, all the participants in the pilot study were included in the main study.

2.10 Data Management

2.10.1 Database

A database was established using Version 18 of the Statistical Package for Social Sciences (SPSS) software programme in order to record and analyse responses to the questionnaire. The database was password protected to ensure confidentiality. The paper copies of the questionnaire were stored in a locked filing cabinet within the researcher's hospital-based office. Furthermore, only the researcher and their academic supervisor had access to original sources of information.

Although contact information was gathered from GPs who requested feedback on the findings of the study, this information was recorded separately to the questionnaire in order to ensure anonymity. Contact details were stored on a Microsoft Excel spreadsheet, which was also password protected.

Each questionnaire was allocated a unique number which referred to the corresponding number on the SPSS database; the number did not identify individuals. The purpose of this was to ensure qualitative information gathered from individual comments following a particular question was attributed to the relevant participant.

In order to ensure data were entered correctly onto the database, the researcher cross-checked 20 random questionnaires against recorded responses. This was particularly pertinent given the high number of participants and therefore greater chance of human error.

The responses to the Attitude towards Suicide Prevention in Older People and Self-reported Clinical Practice scales were also checked for accuracy by running the frequencies command on SPSS. As the scales utilised Likert ratings from 1-5, any response greater than 5 would be regarded as erroneous and requiring correction.

No errors were reported using either method.

2.10.2 Incomplete or Inaccurate Responses

When inputting the data gathered, it became apparent that there were some incomplete questionnaires or responses recorded incorrectly. Questionnaires that had a number of incomplete answers in a given section were not recorded onto SPSS and thus were excluded from the analysis. Ten questionnaires were excluded based on this criterion. Where only one question was missing within a given section, the particular question was termed a missing value on SPSS and was not included in data analyses.

There were also a small number of questions completed inaccurately. For example, when asked to rate the percentage of suicides in older people they considered preventable,

despite being asked to provide a single figure, four participants provided a range (e.g. 80-90%). In such instances the middle figure (median) of the range was recorded (e.g., 85%).

2.10.3 Data Protection

Data protection laws (namely the Data Protection Act, 1998) were followed and the researcher assumed full responsibility for data protection.

As discussed, a database was initially established recording all GPs contact details within the selected health board area, including practice postal address and email addresses. The database was password protected and the content was only used for the purpose of recruiting participants to the study. Only the main researcher had access to this database. The database was permanently deleted following the successful recruitment and gathering of information for the study. This complies with principle 6 of the Data Protection Act which states that "personal data processed for any purposes or purposes shall no be kept longer than is necessary for that purpose or purposes".

In line with the local Research Ethics Committee guidelines and NHS Research and Development policy, the data will be destroyed 5 years after the study has been completed. Paper copies of the questionnaire will be shredded and electronic databases deleted.

2.11 Data Analysis

Analysis of the data was split into two components in order to adequately address the research questions and hypotheses. The first part of the analysis looked to evaluate the psychometric properties of the questionnaire. The second part of the analysis was concerned with testing the research hypotheses.

2.11.1 Psychometric Properties of the Questionnaire

The psychometric properties of the questionnaire were analysed using classic psychometric models, including Cronbach's alpha and exploratory factor analysis, as discussed below.

2.11.1.1 Cronbach's Alpha

Cronbach's Alpha assesses the internal consistency of a measure where the reliability of test scores may be expressed as the ratio of the total score and true score variances (c.f., Cronbach, 1951). It calculates how well a set of items measures a single, unidimensional underlying construct by measuring the inter-correlation between these items. Generally, alpha will increase as the correlation between items also increases.

A Cronbach's Alpha calculation will generate values between 0 and 1. The higher the alpha value the more reliable the measure. It is common practice to accept a measure of 0.70 or more as an indication of high internal consistency, where the questionnaire reliably measures what we intend it to measure (Bland and Altman, 1997).

2.11.1.2 Exploratory Factor Analysis

The original Attitudes to Suicide Prevention Scale has demonstrated good psychometric performance, as previously discussed. The modest amendments to this scale, therefore, did not necessitate further psychometric analysis.

The Self-Reported Clinical Practice Scale was developed specifically for the purpose of testing the current research hypotheses. Exploratory factor analysis was therefore utilised to investigate the psychometric properties of this scale. More specifically Principal Component Analysis with varimax rotation was performed in order to explore possible hidden or latent variables that may explain the relationship between items on the scale.

Three decision rules were used in considering how many factors to retain: Kaiser's criterion, scree test and parallel analysis. Kaiser's criterion (Kaiser, 1974) suggests the selection of components based on the eigenvalues, which should be above 1. The scree test involves plotting the eigenvalues onto a graph (Scree Plot) and noting where there is a natural break in the data where the curve begins to flatten out (Catell, 1966). Parallel analysis (Horn, 1965) looks to compare the size of eigenvalues of a given data set with randomly generated data of the same size. Eigenvalues are retained if they are larger than the corresponding random data set. Research indicates that parallel analysis is one of the most accurate and easy to use methods with regards to factor extraction (e.g. Zwick,

Velicer, 1986). Parallel analysis was calculated using the Monte Carlo PCA statistical program (Watkins, 2000).

2.11.2 Exploration of GPs' Attitudes towards Suicide Prevention in Older People and Self-Reported Clinical Practice

A percentage analysis was conducted for both GPs attitudes towards suicide prevention in older people and their self-reported clinical practice in terms of risk assessment with this client group. Mean scores and modality were also calculated for each individual item of the questionnaire to explore the range of responses.

2.11.3 Testing the Research Hypotheses

A Pearson's correlation was conducted in order to test the hypothesis that GPs attitudes towards suicide prevention will be correlated with self-reported clinical practice.

The following hypotheses will be analysed using independent t-tests to compare group means at the 0.05 significance level:

- There will be a difference in scores between GPs who have experienced suicide in older people compared with GPs with no such experience in terms of attitudes towards suicide prevention and self-reported clinical practice within this client group.
- GPs who have received training on suicide risk assessment will have more favourable attitudes towards suicide prevention in older people and will be more likely to conduct such assessments with this client group.

A one-way ANOVA will be calculate at the 0.05 significance level in order to test the hypothesis that older GPs will have more positive scores in terms of attitudes towards suicide prevention in older people compared with younger participants.

3. RESULTS

3.1 Introduction to Results

The following section will present a detailed account of the findings from the current research study. Background information for all participants will be presented with regard to age, years in general practice, experience of training in suicide and exposure to suicide in an older patient. An analysis of the psychometric properties of the Attitudes towards Suicide Prevention in Older People and Self-Reported Clinical Practice sub-scales will also be presented along with a percentage analysis of responses. Following this, information from the exploratory analysis will be provided to demonstrate that the data met the basic assumptions for parametric testing. The data will then be statistically analysed using both Pearson's correlation and t-tests in order to address the research hypotheses.

3.2 Background Information

3.2.1 Participants

Out of a potential sample of 800 participants, 399 responded (49.9% response rate). 153 completed the online version of the questionnaire, 240 returned a paper copy via the health board's internal mail system and 6 participants completed and returned a questionnaire by email. 10 questionnaires were excluded from analysis as a result of missing data, as discussed in Section 2.10.2. Therefore there were a total of 389 useable questionnaires for the purpose of statistical analysis.

Figure 3 provides a diagrammatic flowchart summarising the number of respondents to the questionnaire, the method of response, and the total number of useable questionnaires recorded onto SPSS.

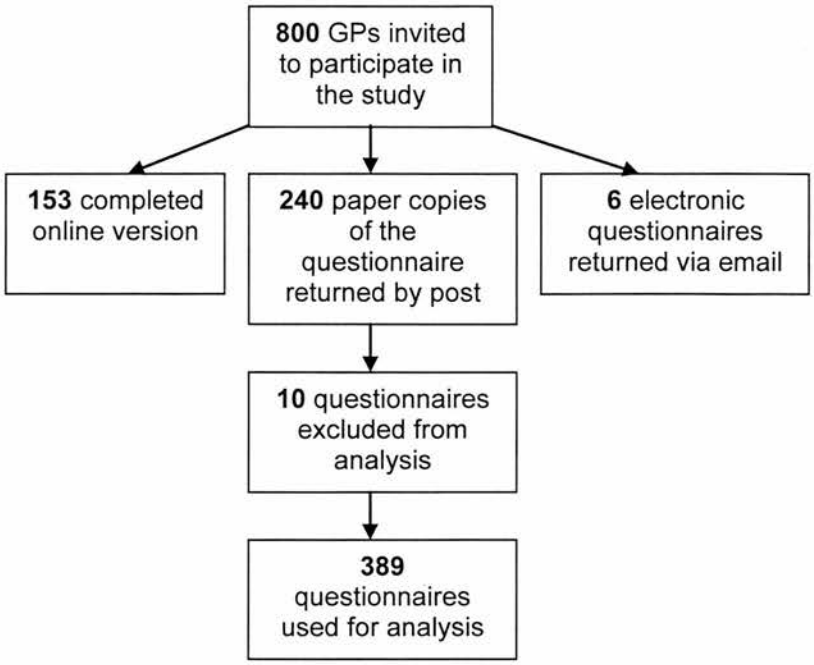

Figure 3: Participation Flowchart: No. of Completed Questionnaires by Method of Completion

The majority of participants (38%) were within the 41-50 years old age band; 32% were within the 30-40 years age band; 24% were aged 51-60 years; 3% were less than 30 years old; and 2% were over 61 years of age. The age ranges appear to be normally distributed, as indicated by the below graph.

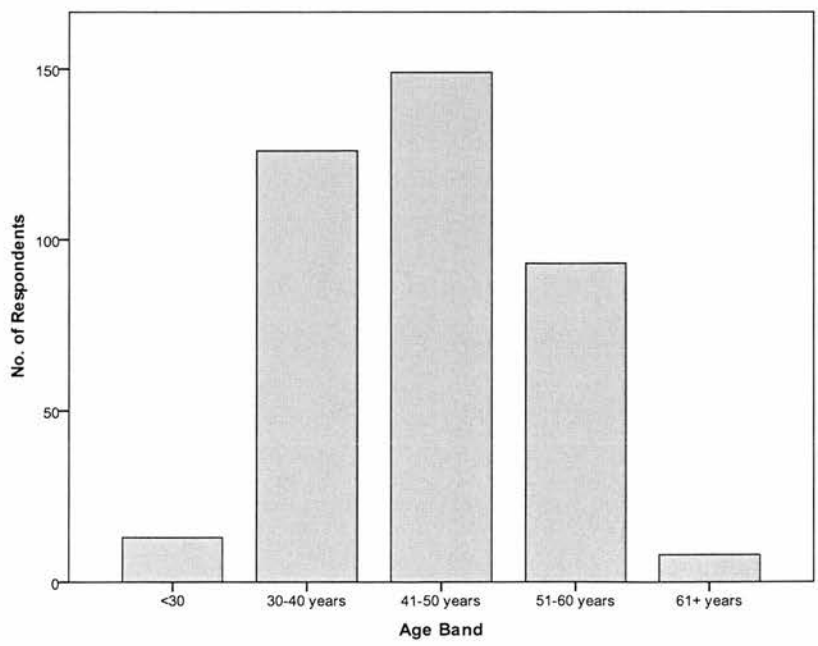

Figure 4: Graph Presenting the Age Bands of Participants

3.2.2 Training

The mean number of years in general practice was 15 years with a range of 4 months to 35 years, therefore capturing a full range of experience.

59% had general training on suicide while only 9% had specific training on suicide in older people. When looking at the qualitative information gathered from the questionnaire, it seems that the majority of participants had training on suicide risk assessment during their under-graduate and post-graduate training (in some instances this was more than 30 years ago) or while working as a trainee doctor in psychiatry. A very small number had received specific suicide training since becoming General Practitioners (approximately 3%).

Figure 5 summarises participants' specialist training in either general psychiatry, geriatric medicine or psychiatry of old age.

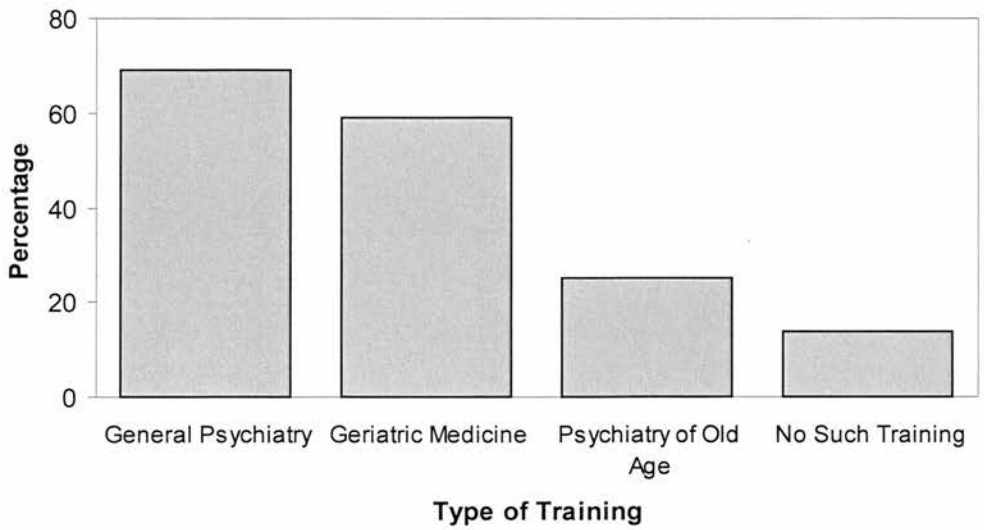

Figure 5: Percentage Summary of Additional Specialist Training Undertaken by Participants

Approximately two-thirds of participants had specialist training in general psychiatry, compared with a quarter specialising in psychiatry of old age. The majority of participants also received training in geriatric medicine.

Almost 20% of participants had no such specialist training.

3.2.3 Experience of Suicide in an Older Person

97% of participants had experienced suicidal ideation in an older person. 61% had an older patient attempt suicide, with 19% experiencing a completed suicide, as indicated in the table below. Therefore the majority of participants had experience of suicide in an older person in terms of either suicidal ideation or an actual attempt, whether successful of unsuccessful.

Table 2: GPs' Experience of Suicidal Behaviour in Older People: Number and Percentage of Respondent by Type and Frequency of Experience

Experience	Response	No. of Respondents	Percentage (%)
Suicidal Ideation	Never	13	3
	Very occasionally	162	42
	Sometimes	189	49
	A lot of the time	25	6
Attempted Suicide	Never	152	39
	Very occasionally	229	59
	Sometimes	8	2
	A lot of the time	0	0
Completed Suicide	Yes	74	19
	No	315	79

3.3 Attitudes towards Suicide Prevention in Older People Scale

The psychometric properties of the "Attitudes towards Suicide Prevention in Older People Scale" will now be presented along with a percentage analysis of responses.

3.3.1 Psychometric Properties

The Attitudes towards Suicide Prevention in Older People Scale (ASPOP) demonstrated internal consistency and reliability as demonstrated by Cronbach's Alpha ($\alpha = 0.67$). High internal reliability is indicated by an alpha score of 0.7 (Bland & Altman, 1997). However, many researchers also accept a value of 0.6 and above as demonstrating moderate reliability (Garson, 2008). Therefore the scale appears to be a moderately reliable measure

of the construct it purports to assess. Furthermore, item–total analysis did not suggest obvious underperforming items to remove to improve the alpha score.

3.3.2 Percentage Analysis

When asked to rate the percentage of suicides in older people they consider preventable, 42 participants (11%) felt they could not answer this question. There were also 21 missing responses. Of those who did provide a percentage, 1 person felt that no suicide was preventable while 14 participants felt they were all preventable. The mean percentage score was 61% (SD 25.4).

Table 3 summarises the responses for each item on the Attitudes towards Suicide Prevention in Older People scale. The range of potential responses is 1-5 where higher scores demonstrate agreement with a particular statement, therefore indicating a more negative attitude. Item 9d ("Working with suicidal patients is rewarding") was reversed scored to reflect this direction.

The scale has a total potential score of 70 where higher numbers reflect increasingly negative attitudes towards suicide prevention in older people. Therefore a total score >= 35 is suggestive of more negative attitudes. The reported mean score of 35.14 suggests marginally negative attitudes.

When looking at individual items, participants responded in a way that suggests more strongly negative attitudes towards the statement "it is easy for people not in clinical practice to make judgements". There was also higher agreement with the statement, "young people are more likely to commit suicide than older people" indicating more negative attitudes towards suicide in older people. More positive attitudes, as indicated by lower scores, were found for items 9b, 9h, 9j, 9n respectively. This seems to indicate that although participants feel younger people are more likely to end their own lives, they do see a role with regards to suicide prevention in older people within primary care.

Table 3: Summary of Item Responses for Attitudes Sub-Scale

Item	Mean (SD)	Mode	Proportion of responses in agreement indicating negative attitudes (%)*	Proportion of responses disagreeing indicating positive attitudes (%)**
9a. Young people are more likely to commit suicide than older people	3.32 (0.99)	4	54	27
9b. Suicide prevention in older people is not my responsibility	1.71 (0.63)	2	2	95
9c. Making more funds available would make no difference to suicide rates in older people	2.52 (0.84)	2	10	52
9.d Working with suicidal patients is rewarding	2.63 (7.8)	2	17	52
9e. If older people are serious about committing suicide they don't tell anyone	3.22 (0.91)	4	46	27
9f. I feel defensive when people offer me advice about suicide prevention in older people	2.02 (0.72)	2	4	83
9g. It is easy for people not in clinical practice to make judgements	3.44 (0.92)	4	58	19
9h. If an older person survives a suicide attempt then this was a ploy for attention	1.75 (0.62)	2	6	94
9i. Older people have the right to take their own life	2.96 (0.98)	3	33	34
9j. Suicide measures for older people are a drain on resources	1.97 (0.64)	2	2	86
9k. There is no way of knowing who is going to commit suicide	2.3 (0.71)	2	7	72
9l. Suicide in older people is understandable	2.85 (0.95)	2	33	44
9m. Suicide prevention would be more successful in younger people	2.44 (0.72)	2	6	58
9n. I resent being asked to do more about suicide in older people	1.99 (0.67)	2	4	86
TOTAL	**35.14 (4.88)**		**50.2**	**49.8**

*4 (agree) & 5 (strongly agree) on the Likert scale except for q9d which is 1 (strongly disagree) &2 (disagree) **1&2 on the Likert scale except for Q9d which is 4&5

Responses for each item of the Attitudes towards Suicide Prevention in Older People Scale are presented within the below graphs.

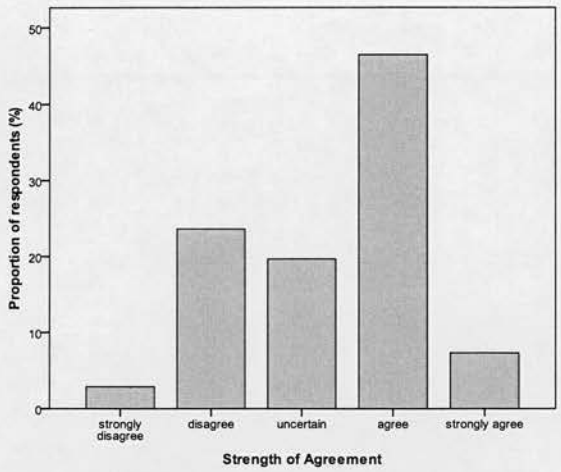

Figure 6: Strength of agreement by proportion of respondents for statement 9a: "Young people are more likely to commit suicide than older people"

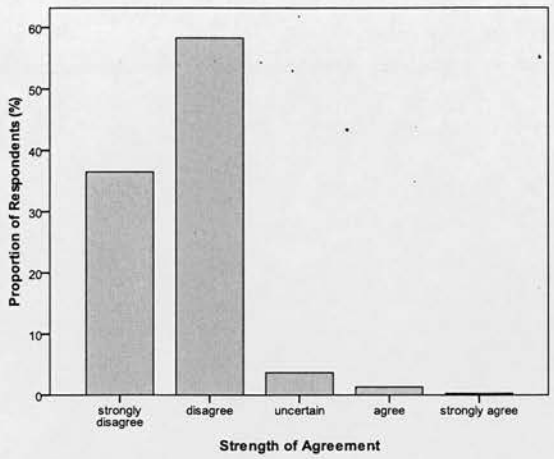

Figure 7: Strength of agreement by proportion of respondents for statement 9b: "Suicide prevention in older people is not my responsibility"

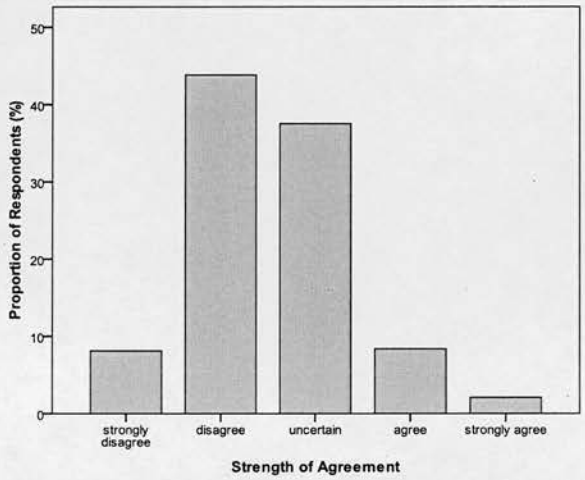

Figure 8: Strength of agreement by proportion of respondents for statement 9c: "Making more funds available would make no difference to suicide rates"

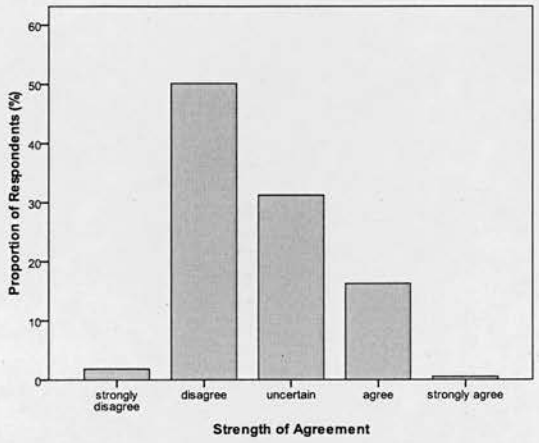

Figure 9: Strength of agreement by proportion of respondents for statement 9d: "Working with suicidal patients is rewarding"

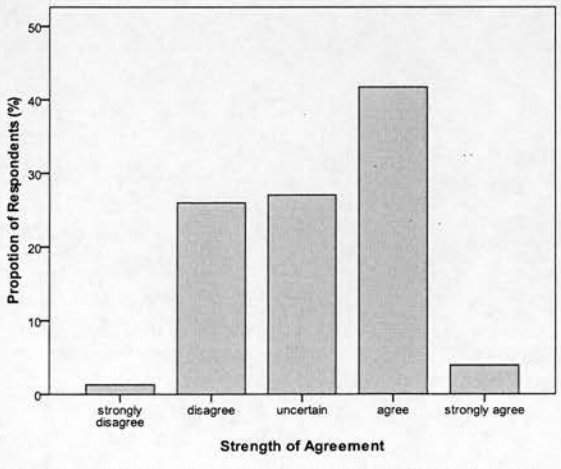

Figure 10: Strength of agreement by proportion of respondents for statement 9e: "If older people are serious about committing suicide they don't tell anyone"

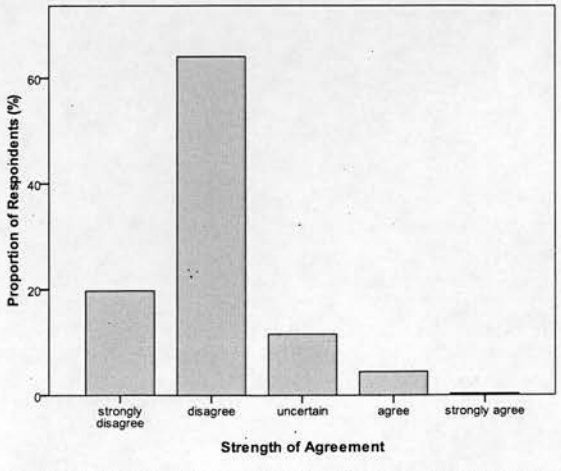

Figure 11: Strength of agreement by proportion of respondents for statement 9f: "I feel defensive when people offer me advice about suicide prevention"

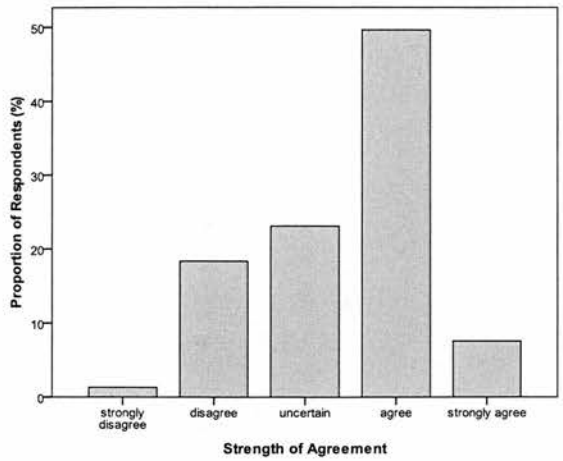

Figure 12: Strength of agreement by proportion of respondents for statement 9g: "It is easy for people not in clinical practice to make judgements"

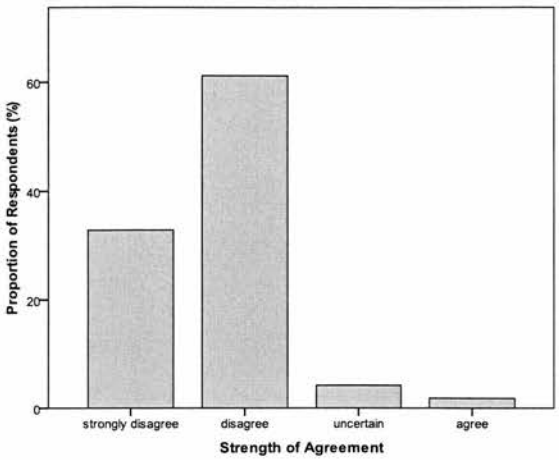

Figure 13: Strength of agreement by proportion of respondents for statement 9h: "If an older person survives suicide then this was a ploy for attention"

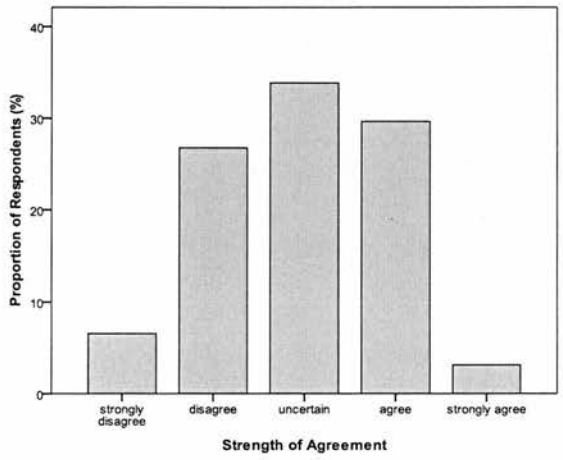

Figure 14: Strength of agreement by proportion of respondents for statement 9i: "Older people have the right to take their own life"

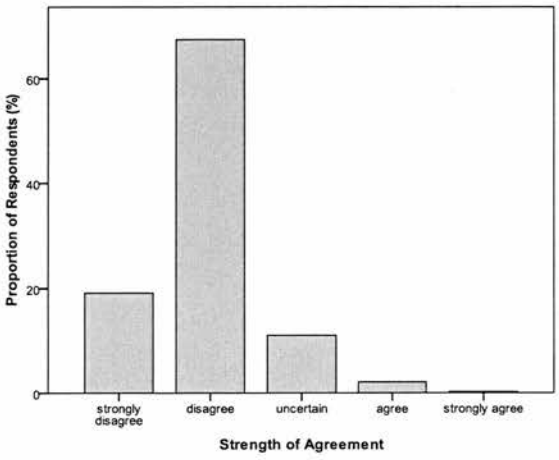

Figure 15: Strength of agreement by proportion of respondents for statement 9j: "Suicide prevention measures for older people are a drain on resources"

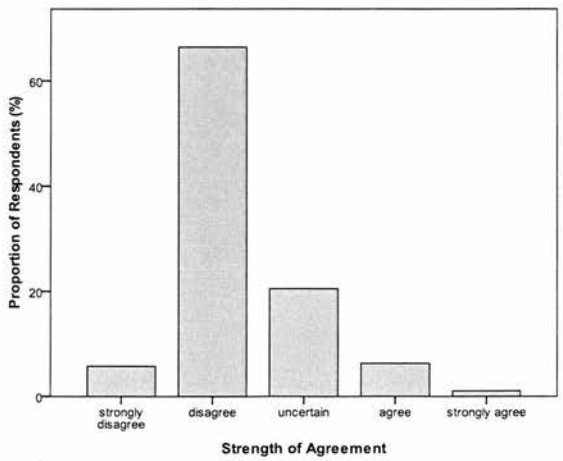

Figure 16: Strength of agreement by proportion of respondents for statement 9k: "There is no way of knowing who is going to commit suicide"

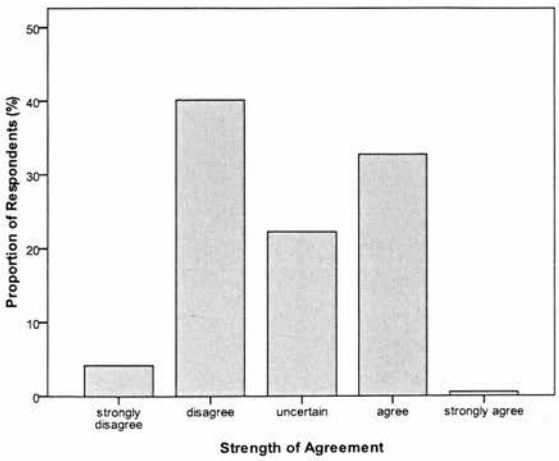

Figure 17: Strength of agreement by proportion of respondents for statement 9l: "Suicide in older people is understandable"

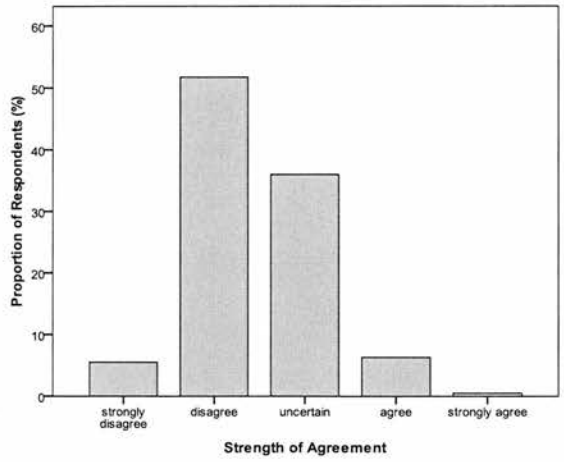

Figure 18: Strength of agreement by proportion of respondents for statement 9m: "Suicide prevention would be more successful in younger people"

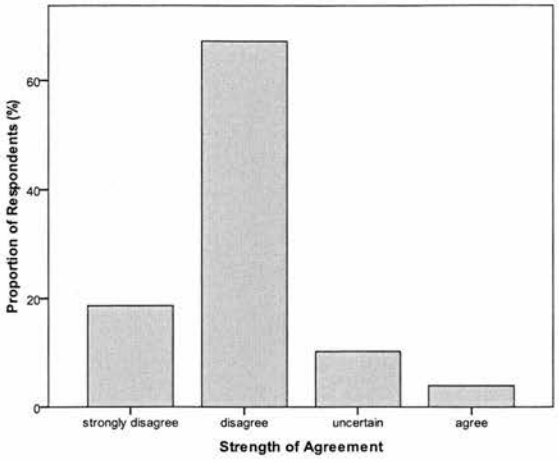

Figure 19: Strength of agreement by proportion of respondents for statement 9n: "I resent being asked to do more about suicide in older people"

As well as providing a pictorial representation of the data outlined in Table 3, the graphs highlight the statement that received the most "uncertain" responses, namely item 9i ("Older people have the right to take their own life"). A number of participants provided qualitative responses following this question. Examples of the types of comments expressed are as follows:

- "It is not illegal, but it is not right".
- "Ultimately I think all people do [have the right to commit suicide]: that shouldn't stop us trying to prevent this [suicide] if possible".
- "This is emotive but I do support the right to choose, and think that suicide is a rational decision for some older people".
- "We all do – if in sound mind".
- "Only if they have capacity, although I would prefer them not to take their own life".
- "If not depressed and [where they are] suffering a terminal illness".
- "They also have a right to get help out of a situation where they see that [suicide] as the only option".

3.4 Self-reported Clinical Practice Scale

The psychometric properties of the "Self-Reported Clinical Practice Scale" will now be presented along with a percentage analysis of responses.

3.4.1 Psychometric Properties

3.4.1.1 Cronbach's Alpha

Cronbach's Alpha for the Self-reported Clinical Practice sub-scale ($\alpha = 0.65$) demonstrated moderate reliability (Garson, 2008). Item–total analysis did not suggest obvious underperforming items to remove to improve the alpha score.

3.4.1.2 Exploratory Factor Analysis

The 8 items of the Self-reported Clinical Practice sub-scale were analysed using Principal Component Analysis (PCA) with varimax rotation. Prior to performing PCA the data set was analysed with regards to suitability for factor analysis. The Kaiser-Meyer-Oklin value was 0.73, therefore exceeding the recommend value of 0.6 (Kaiser, 1974). The Bartlett's Test of Spherity (Bartlett, 1954) was statistically significant ($p<0.001$) thus supporting the factorability of the correlation matrix.

The PCA revealed 3 components with Eigenvalues of 1 or above (Kaiser, 1974), explaining 30.48%, 43.88%, and 56.85% of the variance cumulatively. However, the scree plot (Graph 16) seemed to suggest a one component solution. Parallel analysis was therefore conducted to provide further guidance on the number of factors to retain.

Eigenvalues of a randomly generated data matrix of the same size (11 variables x 389 participants) was compared with the corresponding criterion values for the current data set. Only the first factor exceeded the corresponding values, providing further support for a one-factor solution.

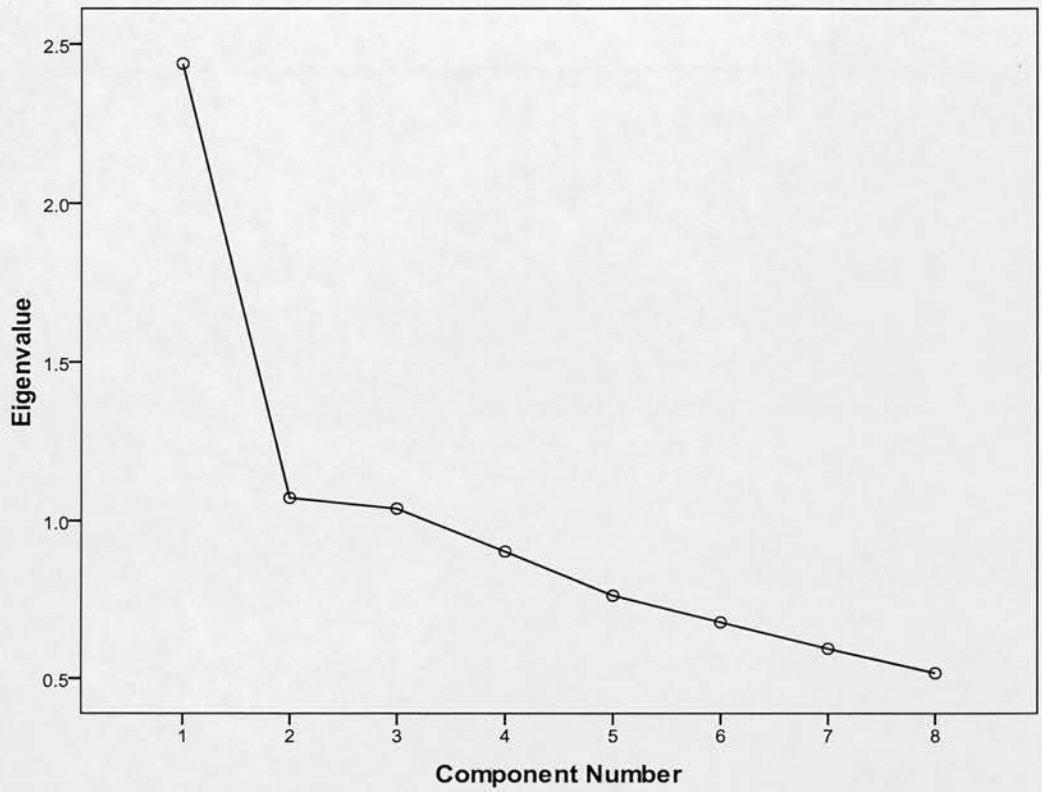

Figure 20: Scree Plot of Eigenvalues for each Component

The unrotated loadings, as indicated by the component matrix (Table 4), demonstrates that all 8 items load strongly (above 0.4) on the first components, with only a few on the second and third component, providing further evidence that the scale is measuring a uni-dimensional construct. Furthermore, the matrix does not highlight any obvious item for scale reduction.

Table 4: Component Matrix

Item	Component		
	1	2	3
11a. I am more likely to assess suicide in a young person	**0.541**	0.158	-0.206
11b. It is not possible to assess suicide risk in older people (OP)	**0.483**	-0.331	**0.597**
11c. I need more training in assessing suicide risk in OP	**0.666**	-0.215	-0.228
11d. I feel comfortable assessing suicide in OP	**0.635**	-0.382	-0.256
11e. I am too pressed for time to routinely assess suicidal ideation in OP	**0.555**	**0.402**	0.027
11f. Older patients have so many physical problems	**0.611**	**0.408**	-0.341
11g. Assessing suicide is best left to geriatric psychiatry	**0.544**	-0.326	0.304
11h. Assessing for suicide automatically places the responsibility on me	**0.398**	**0.558**	**0.558**

Strong loadings are in bold

The one-factor solution was therefore accepted.

3.4.1 Percentage Analysis

Table 5 summarises how often participants carry out a suicide risk assessment with an older person.

Table 5: Summary of how often participants assess for suicide risk in an older person

	No. of Participants	Percentage
Never	5	1
Almost never	75	20
Sometimes	243	64
Most of the time	42	11
All of the time	12	4

Participants were given the opportunity to comment following this question. When looking at the qualitative information derived from these comments, it became apparent that there was some ambiguity in relation to the meaning of the question. A number of participants questioned whether the statement related to carrying out risk assessment with *every* older patient or only those with mental health issues. A small number reported that they would always carry out a risk assessment if an older person had known depression, however would not routinely carry out a risk assessment with all older patients. Such ambiguity may have impacted on the way in which participants responded to this particular question.

Table 6 provides a summary of the individual responses regarding self-reported clinical practice for assessing suicide risk in older people. The range of potential responses is 1-5, where higher numbers equate to less proactive clinical practice. The responses to question 11d were therefore reverse scored to reflect this direction.

The majority of participants reported that they are more likely to assess suicide risk in a young person. Furthermore, over half of the participants were not comfortable assessing suicide risk in older people. 26% of participants agreed with the statement that they are

too pressed for time to routinely assess suicide risk in older people, while 53% reported that older patients have too many physical health problems to address issues of suicidality.

Most of the participants recognised a role for assessing suicide risk in older people by General Practitioners, as indicated by a high percentage of scores disagreeing with the statements 11b and 11g. However, the majority of participants also felt that they would benefit from further training in the area.

Table 6: Summary of Item Responses for Self-reported Clinical Practice

Item	Mean (SD)	Mode	Proportion of responses in agreement (%)*	Proportion of responses disagreeing(%)**
11a. I am more likely to assess suicide in a young person than an older person	3.14 (1.08)	4	53	39
11b. It is not possible to assess suicide risk in older people	1.90 (0.47)	2	1	96
11c. I need more training in assessing suicide risk in older people	3.16 (0.88)	4	42	26
11d. I feel comfortable assessing suicide in older people	2.64 (0.87)	2	22	55
11e. I am too pressed for time to routinely assess suicidal ideation in older people	2.61 (0.96)	2	26	60
11f. Older patients have so many physical problems that I don't always have time to consider suicide risk	3.19 (0.99	4	53	36
11g. Assessing suicide intent in older people is best left to geriatric psychiatrists	2.10 (0.61)	2	5	86
11h. Assessing for suicidal intent automatically places the responsibility for treatment on me	2.53 (0.90)	2	23	67

*4&5 on the Likert scale except for Q11d which is 1&2
**1&2 on the Likert scale except for Q11d which is 4&5

A summary of the actual responses for each item is presented in the graphs below.

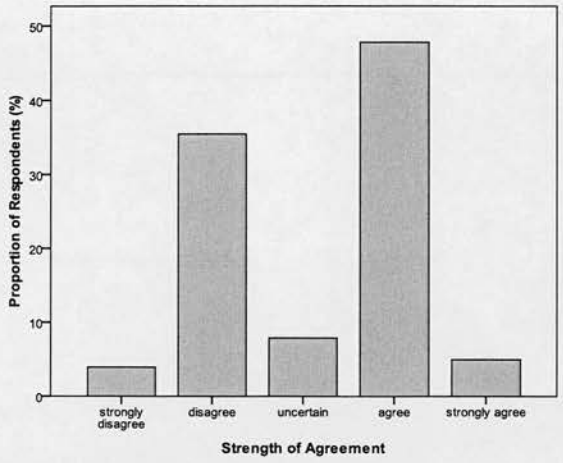

Figure 21: Strength of agreement by proportion of respondents for statment 11a: "I am more likely to assess suicide in a young person"

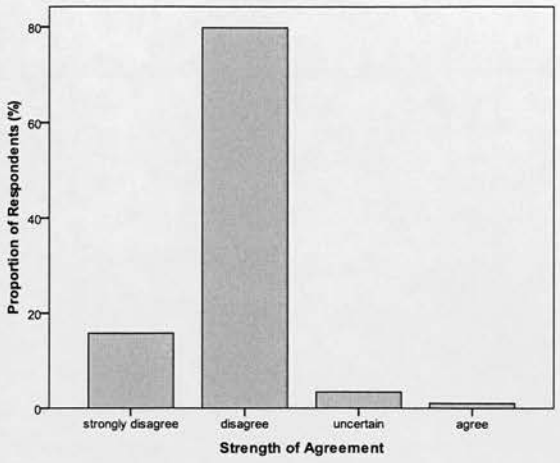

Figure 22: Strength of agreement by proportion of respondents for statment 11b: "It is not possible to assess suicide risk in older people"

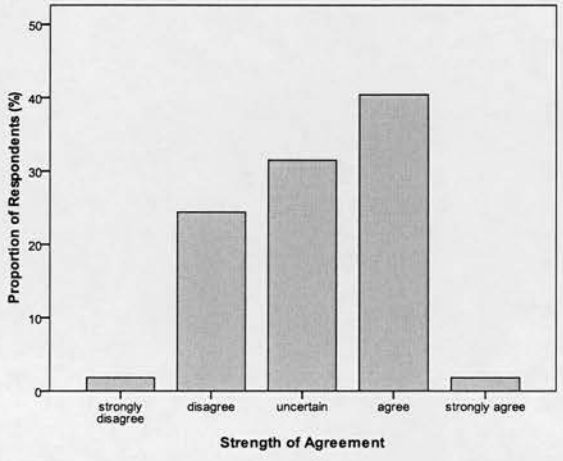

Figure 23: Strength of agreement by proportion of respondents for statment 11c: "I need more training in assessing suicide risk in older people"

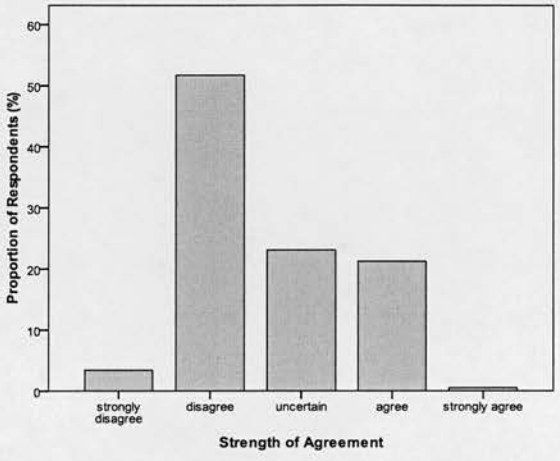

Figure 24: Strength of agreement by proportion of respondents for statment 11d: "I feel comfortable assessing suicide in older people"

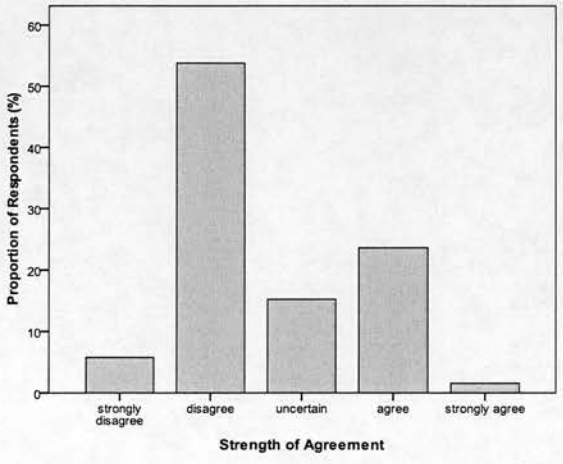

Figure 25: Strength of agreement by proportion of respondents for statment 11e: "I am too pressed for time to routinely assess suicide in older people"

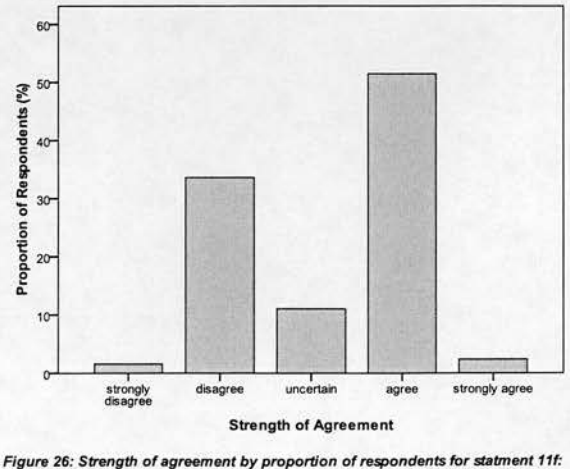

Figure 26: Strength of agreement by proportion of respondents for statment 11f: "Older patients have so many physical problems that I don't have time to consider suicide risk"

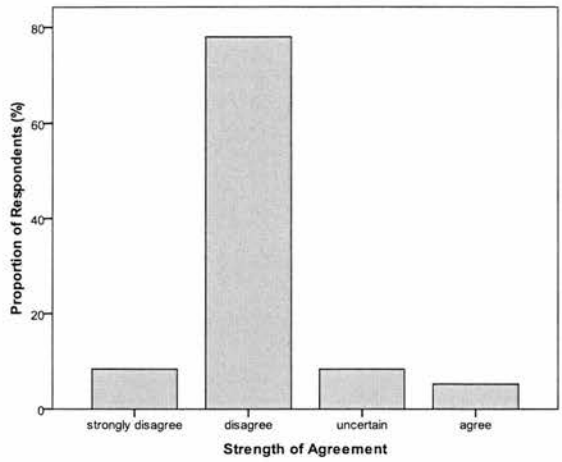

Figure 27: Strength of agreement by proportion of respondents for statment 11g: "Assessing suicide is best left to geriatric psychiatrists"

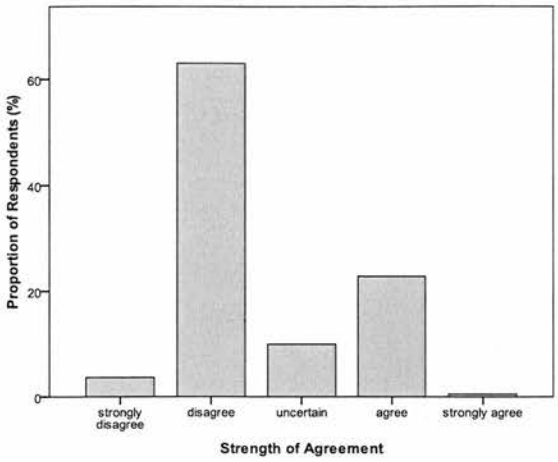

Figure 28: Strength of agreement by proportion of respondents for statment 11h: "Assessing suicide risk automatically places the responsibility for treatment on me"

3.5 Explorative Analysis prior to Parametric Testing

The data set was analysed to ensure that the variable values met the basic assumptions for parametric testing prior to statistically analysing the research hypotheses. These assumptions demand that the distribution of both variables should be normal, linear and homoscedastic.

When looking at the histograms (Figure 29 and Figure 30) it appears that the variables "attitudes towards suicide prevention" and "self-reported clinical practice" are normally distributed. This is supported by statistical analysis of skewness and kurtosis, as indicated in the table below.

Table 7: Summary of Kurtois and Skew Analyses

Variable (Sum of Scores)	Mean (SD)	Median	Skew (SE)	Kurtosis (SE)
Attitude	35.14 (4.88)	35	0.096 (0.13)	0.51 (0.25)
Clinical Practice	21.30 (3.76)	21	-0.23 (0.13)	0.59 (0.25)

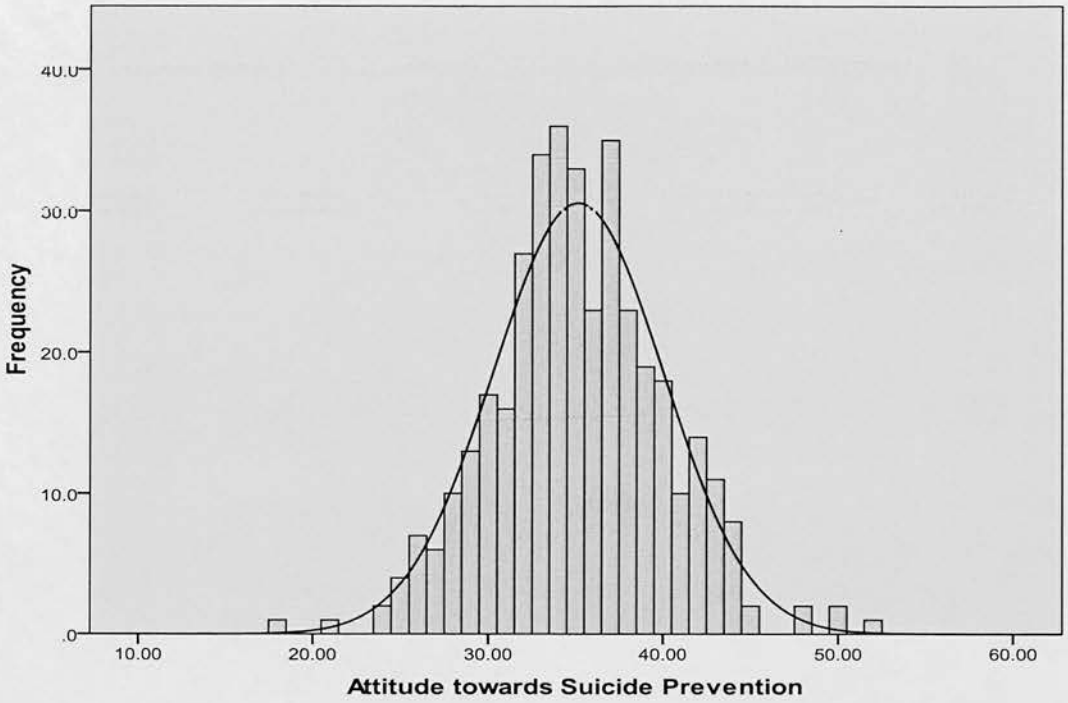

Figure 29: Histogram plotting frequency of total scores for attitudes towards suicide prevention in older people sub-scale

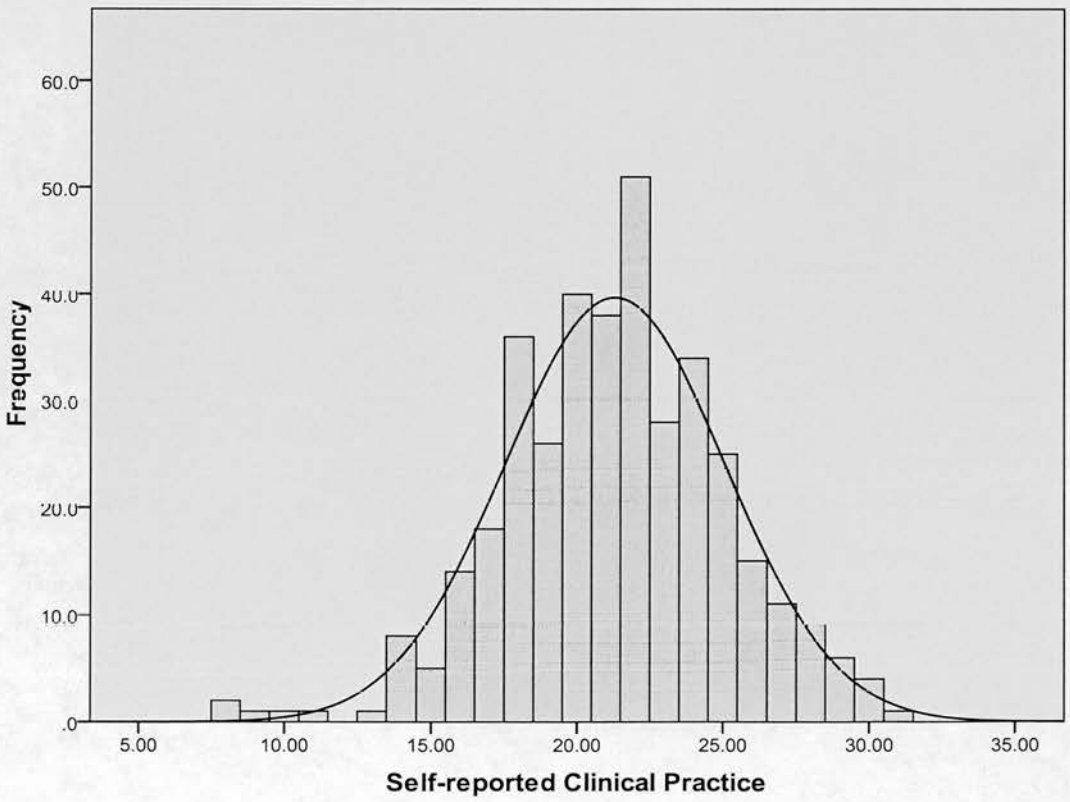

Figure 30: Histogram plotting frequency of total scores for self-reported clinical practice sub-scale

The below scatterplot also indicates that the data meets the assumptions with regards to linearity and homoscedascity.

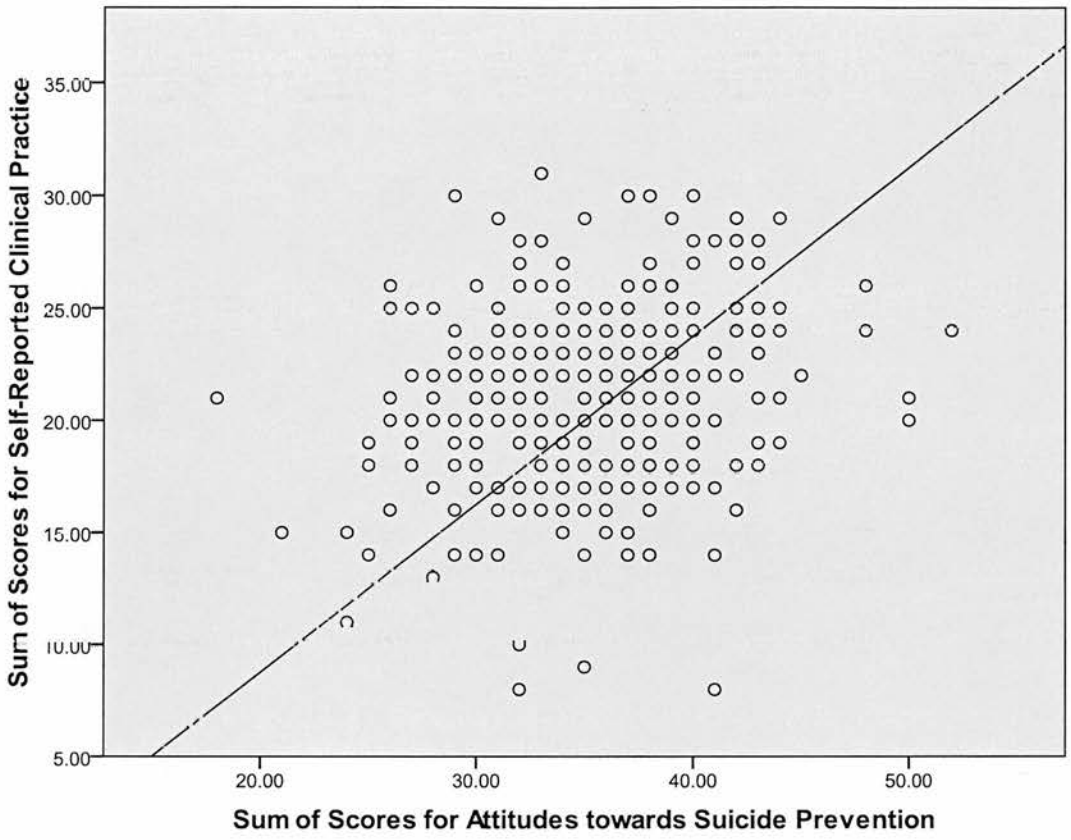

Figure 31: Scatterplot showing relationship between attitudes with clinical practice

The explorative analysis, therefore, indicates that there is no violation of the basic assumptions for parametric testing.

3.6 Statistical Analysis to Test the Research Hypotheses

The remainder of this chapter will present the statistical analyses for each of the research hypotheses.

3.6.1 Hypothesis 1: General Practitioners' attitudes towards suicide prevention will be correlated with self-reported clinical practice

The scatter plot (Figure 31) shows a positive correlation between participants' attitude towards suicide prevention in older people and their self-reported clinical practice where more negative attitudes are associated with less proactive clinical practice. Statistical analysis supports this correlation ($r = 0.22$, $p<0.001$). These findings demonstrate a small to moderate effect size (Cohen, 1992).

3.6.2 Hypothesis 2: There will be a difference in scores between GPs who have experienced suicide in older people compared with GPs with no such experience in terms of attitudes towards suicide prevention and self-reported clinical practice within this client group.

Table 8 below provides a summary of the distribution and variance of the data for the two groups under consideration: experience of suicide (n = 74) versus no such experience (n = 315).

Table 8: Summary of Distribution and Variance between Groups

	Experience of Suicide	Mean (SD)	Median	Variance	Kurtosis (SE)	Skew (SE)
Attitude	Yes	35.90 (4.99)	35	25.19	0.74 (0.56)	0.64 (0.28)
	No	34.97 (4.85)	35	23.64	0.3 (0.28)	-0.05 (0.14)
Self-Reported Clinical Practice	Yes	20.73 (3.59)	21	14.23	0.46 (0.56)	-0.33 (0.28)
	No	21.39 (3.77)	21	12.89	0.67 (0.28)	-0.21 (0.14)

Explorative analysis of the distribution and variance of the data for both groups did not indicate violation of the basic assumptions for parametric testing, and therefore an independent t-test was conducted to compare mean scores. Furthermore, t-tests are robust enough to handle unequal group sizes assuming there is equal variance and distribution between the groups. Appendix 6 provides histograms and box plots demonstrating normal distribution and equal variance between groups.

3.6.2.1 Differences in Attitudes towards Suicide Prevention in Older People

An independent t-test was calculated to compare the total mean scores of attitudes towards suicide prevention in older people for participants who had or had not experienced a completed suicide in an older patient. However, no significant difference was found ($t = -1.65$, $df = 378$, $p = 0.10$). The magnitude of the differences between the means (mean difference = -0.67, CI (95%) -1.61 to 0.28) was negligible (Cohen's $d = 0.19$) (Cohen, 1992).

The two group means were also compared for individual items on the Attitudes towards Suicide Prevention in Older People Scale by conducting an independent t-test at the 0.05 significance level. The results indicated that items 9g ("It's easy for people not involved in clinical practice to make judgements") and 9l ("Suicide in older people is understandable") highlighted significant differences between those who had experienced a suicide in an older patient and those who had no such experience, as indicated in Table 9.

Table 9: Significant t-test results: Comparison of group means for participants who had or had not experienced a completed suicide in an older patient

Item	Experience of Suicide	Mean (SD)	T Value	DF	P	Mean Difference	Confidence Intervals (95%)
9g. It is easy for people not in clinical practice to make judgements	Yes	3.69 (0.96)	2.59	387	0.01	0.305	0.07 to 0.54
	No	3.38 (0.90)					
9l. Suicide in older people is understandable	Yes	3.11 (0.90)	2.49	387	0.01	0.301	0.06 to 0.54
	No	2.81 (0.95)					

The mean scores suggest that participants who had an older patient commit suicide were more likely to agree with both of these statements, demonstrating more negative attitudes.

The magnitude of differences between the groups, as calculated using Cohen's *d*, demonstrated a small to moderate effect size for both 9g ($d = 0.33$) and 9l ($d = 0.34$) (Cohen, 1992).

3.6.2.2 Differences in Self-reported Clinical Practice

An independent t-test indicated no statistical difference between participants who had or had not experienced a completed suicide in an older patient when considering total mean score for self-reported clinical practice (t = -1.4, df = 387, p = 0.17, CI (95%) -1.61 to 0.28).

Differences in group means for individual items on the scale were also calculated using an independent t-test at the 0.05 significance level. However, only item 11c ("I need more training for assessing suicide risk in older people") demonstrated a statistical difference between the two groups (t = -2.64, df = 387, p = 0.009). The magnitude of the differences between the means (mean difference = -0.30, CI: -0.52 to -0.08) demonstrated a small to moderate effect size (d = 0.34) (Cohen, 1992).

A comparison of the means suggests that participants who had experienced an older patient commit suicide are less likely to agree with the statement than participants with no such experience (mean scores are 2.91 & 3.21 respectively).

3.6.3 Hypothesis 3: GPs who have received training on suicide risk assessment will have more favourable attitudes towards suicide prevention in older people and will be more likely to conduct such assessments with this client group.

In exploring Hypothesis 3, both general training in suicide risk assessment and specific training assessing risk in older populations were considered for statistical analysis. Table 9 provides a summary of the distribution and variance for each of these groups, comparing participants who had or had not received training in suicide risk assessment (general or specific).

A comparison of the means suggests that there is a small difference between those who had received training, either general or specific, with regards to attitudes towards suicide prevention and self-reported clinical practice where the participants who had the training were more positive on both accounts. An independent t-test was carried out to assess whether this constituted a statistical difference.

Table 10: Summary of distribution and variance between groups: Comparison of participants who had or had not received training on suicide with attitude to suicide prevention in older people and self-reported clinical practice

			No. of Respondents	Mean (SD)	Variance	Kurtosis (SE)	Skew (SE)
Attitude	General Training	Yes	225	34.83 (4.99)	24.88	0.759	0.111
		No	164	35.57 (4.72)	22.25	0.012	0.095
	Specific Training	Yes	35	33.86 (5.18)	26.83	1.798	0.703
		No	354	35.27 (4.84)	23.44	0.036	0.429
Self-Reported Clinical Practice	General Training	Yes	225	20.86 (3.92)	15.38	0.719	-0.278
		No	164	21.83 (3.38)	11.45	-0.142	0.082
	Specific	Yes	35	19.83 (4.45)	19.79	0.488	-0.428
		No	354	21.41 (3.63)	13.17	0.485	-0.123

Explorative analysis indicated that the basic assumptions for parametric testing were met. Appendix 7 provides a histogram for each group in order to demonstrate normal distribution of the data graphically.

Table 11 provides a summary of the findings from the t-test.

Table 11: Summary of the independent t-test: Comparison of group means between participants who had or had not received training on suicide with attitude and self-reported clinical practice behaviour

Dependent Variable	Independent Variable	T value	Degrees of Freedom	P value	Mean Difference	Confidence Interval (95%)
Attitudes	General Training	-1.47	2, 387	0.14	-0.74	-1.72 to 0.25
	Specific training	-1.64	2, 387	0.10	-1.42	-3.11 to 0.28
Self-reported Clinical Practice	General Training	-2.57	2, 387	0.01**	-0.98	-1.72 to -0.23
	Specific Training	-2.41	2, 387	0.02*	-1.58	-2.87 to -0.29

*Significant at the 0.05 level

**Significant at the 0.01 level

There is no significant difference between participants who received training in suicide and attitudes towards suicide prevention, whether the training was general or specific to older people. However, there was a statistical difference between the two groups in terms of self-reported clinical practice. The magnitude of these differences was 0.29 (general training) and 0.39 (specific training) indicating a small to moderate effect size (Cohen, 1992).

3.6.4 Hypothesis 4: Older GPs will have higher positive scores in terms of attitudes towards suicide prevention in older people compared with younger GPs.

There were insufficient numbers of participants in the outer age bands for statistical analysis: <30 years (n = 13); 61+ years (n = 8). Therefore age bands "<30 years" and "31-40 years" were collapsed together as were "51-60 years" and "61+ years" to ensure sufficient numbers in each category. Table 12 provides a summary of the mean scores, standard deviations and the associated confidence intervals for each age band.

Table 12: Summary of means, standard deviations, range and CI for age bands

Age Band	No. of Participants	Mean (SD)	Range	Confidence Intervals (95%)
<30 – 40 years	139	33.70 (4.33)	24 - 44	32.97 to 34.42
41 – 50 years	149	35.27 (4.93)	21 - 52	34.48 to 36.07
51 – 61+ years	101	36.95 (4.94)	18 - 50	35.97 to 37.93

The data met the basic assumptions for parametric testing, as indicated by the Levene's test for homogeneity (0.44) and histograms demonstrating normal distribution (please refer to Appendix 8). Therefore, a one-way, between-groups ANOVA was conducted to statistically analyse the impact of age on participants' attitudes towards suicide prevention in older people. There was a statistically significant difference in attitudes towards suicide prevention across the age bands ($F\ (2, 386) = 13.93$, $p = 0.000$).

The effect size of this difference was calculated using Eta², which is defined as follows:

$$\eta^2 = \frac{SS_{between}}{SS_{total}}$$

Where:

$SS_{between}$ = Sum of squares between groups

SS_{total} = Total sum of squares

A medium to large effect size ($\eta^2 = 0.07$) was found (Cohen, 1988).

When looking at the means for each age band it appears that the younger participants had more positive scores (as indicated by lower values) with regards to attitudes towards suicide prevention in older people compared with older participants. Post-hoc comparisons using Tukey HSD test demonstrated a statistical difference between all three age groups ($p<0.05$).

4. DISCUSSION

4.1 Chapter Overview

The present study provides a useful insight into General Practitioners' (GPs) attitudes towards suicide prevention in older people and the impact of such attitudes on clinical practice in terms of conducting a risk assessment with this client group. It also explores additional psychological processes that may influence service provision, such as GPs' perceived ability to conduct suicide risk assessment within their clinical practice. Furthermore, it investigates whether certain factors, such as the age of GPs or previous training in suicide, impact on attitudes or clinical practice in relation to suicide in older people. The overall aim was to enhance understanding of potential barriers within primary care to reduce suicide rates in older populations against a backdrop of policy and government targets.

The following chapter will provide a detailed discussion of the current findings in light of previous research. A discussion will then be presented as to the clinical implications of the findings. The strengths and limitations of the study will be discussed along with suggestions for further research. The chapter will conclude with an overall summary of the research.

4.2 Detailed Discussion of Results

4.2.1 GPs' Experience of Suicide in Older People

According to previous research, older people rarely complain of psychological symptoms such as low mood or suicidal intent (Brodaty *et al.,* 1991). However, the findings from the present study do not appear to support this assertion. The vast majority of GPs surveyed (97%) had experienced suicidal ideation in an older patient. Furthermore, the reported frequency of this experience (over half of the participants reported experiencing suicidal ideation in an older person either "sometimes" or "a lot of the time") demonstrates that these are not "one off" events. Therefore, older people are reliably expressing psychological distress at clinical appointments.

This is supported by research that suggests older people prefer to discuss such issues with their GP, who they know and trust (Waxman, Carner & Blum, 1983). GPs themselves have acknowledged that when they discuss the links between emotional health and physical health, older people are willing to engage in such discussions (Murray *et al.,* 2006). This highlights the important role of primary care in suicide prevention in older people.

Despite the fact that older people are expressing psychological distress to their primary care practitioner, suicidal intent is often not recognised or acted upon (Uncapher & Arean, 2000). Attitudes towards mental illness and the ageing process have been highlighted as adversely impacting on service provision within primary care (Crawford *et al.,* 1998; Gunderson *et al.,* 2005, Murray *et al.,* 2006). It is therefore important to explore the range of attitudes towards suicide prevention in older people expressed by GPs in the present study prior to investigating the impact of such attitudes on clinical practice.

4.2.2 GPs' Attitudes towards Suicide Prevention in Older People

Research indicates that primary care practitioners hold negative attitudes towards ageing and mental illness, particularly with regards to late-life depression where psychological distress is often viewed as a natural reaction to the ageing process (Collins *et al.,* 1995; Crawford *et al.,* 1998; Garner, 2003; Murray *et al.,* 2006; Rothera, Jones & Gordon, 2002). The present study looked to replicate these findings by focussing on GPs' attitudes towards suicide prevention in older populations.

The findings indicate that GPs' attitudes are neither strongly positive nor negative, although on the whole were marginally negative in nature. A similar finding was reported by Herron *et al.* (2001) when exploring GPs' attitudes towards suicide prevention within the general population. These comparable findings seem to suggest that the age of the target population does not influence GPs' attitudes with regards to their role in suicide prevention. Focussing on attitudes towards suicide in older people within the current study, however, highlighted potentially erroneous age-related beliefs that would not have otherwise been identified. These will now be discussed.

4.2.2.1 The Risk of Suicide among Older Age Groups

The majority of participants (54%) felt that younger people were more likely to commit suicide than an older person. This is contrary to prevalence studies which demonstrate that the risk of suicide increases with age with a greater number of older people dying as a result of a suicide attempt (Conwell, Duberstein & Caine, 2002; WHO, 2002). Research suggests that this perception may be explained by the way in which suicidal older people present to GPs. For example, although the majority of older people who had taken their life visited their GP within a month of their death, they tended to present with physical complaints rather than expressing psychological distress (Isometsca, Heikkinen & Marttunen, 1995). Moreover, Quinn *et al.* (2009) reported that the perceived stigma of mental illness within this population prevents older people seeking help. This makes it difficult for GPs to identify older people at risk, which may be compounded by their own beliefs around mental illness and ageing.

In the present study almost half of the participants believed that if an older person is serious about committing suicide they will not inform others of their intent. This is perhaps surprising given the high reporting of older patients expressing suicidal ideation within clinical practice, as previously discussed. These contrary findings highlight discrepancies between what an individual believes and actual clinical experiences. Perhaps participants in the present study have interpreted the expression of suicidal intent as an indication that the person was not serious about ending their life.

Furthermore, suicidal ideation in older people may be viewed as a "rational" reaction to the ageing process, which is often viewed as a time of loss and decline (Baltes & Smith, 2003). Consequently practitioners, and indeed older people themselves, may underplay thoughts of suicide. In doing so, however, difficulties may become more severe and entrenched, increasing an individual's risk to actually taking their own life (Pompili *et al.,* 2005). These themes are discussed further below.

4.2.2.2 "Rational" Suicide

Previous research has consistently found that primary care practitioners view symptoms of depression as a rational reaction to the ageing process (e.g. Crawford *et al.*, 1998; Murray

et al., 2006). This view has been echoed within older populations themselves (e.g. Quinn *et al.*, 2009; Pearson & Brown, 2000; Uncapher & Arean, 2000) and may be one of the biggest barriers to the recognition and treatment of suicide ideation. The findings from the current study replicated previous research where over half of the participants reported a belief that suicide in an older person is "understandable".

There appears to be discrepancies between GPs' beliefs that suicide in an older person is understandable when considered against the actual experiences of older people, the majority of whom will experience the ageing process positively (Laidlaw, *et al.,* 2007). Prevalence studies report that feelings of suicide and hopelessness within the general older adult population range from as low as 1%-4% (Crosby, Cheltenham & Sacks, 1999; Kirby *et al.,* 1997). Furthermore, rates of depression in older populations are comparable to those seen in the general population (Futterman *et al.*, 1995; Vaillant & Mukamal, 2001). It could be argued that GPs, due to the very nature of their job, are exposed to a sample of older people that is not representative of the population as a whole and may wrongly generalise about the status of their health and well-being.

GPs' attitudes towards ageing may also be influenced by negative perceptions of old age within society where it is seen as a time of loss and decline (Baltes & Mayer, 1999). Research does indicate that with increasing age comes greater opportunity to experience negative life events, such as the death of a partner and a decline in physical health (Baltes & Smith, 2003). That said, older people also have a greater capacity to cope with such adversity as a result of emotional maturation and the development of better coping strategies compared with younger individuals with less life experience (Lang, 2001; Ong & Bergeman, 2004; Mather & Carstensen, 2005; Vaillant & Mukamal, 2001). Further research could look to explore GPs' knowledge of healthy ageing and whether this impacts on attitudes towards mental health and well-being in old age; this will be explored further under Section 4.9.1.

4.2.2.3 The Right to Commit Suicide

According to the findings reported by Herron *et al.* (2001), front-line professional groups tend to disagree with the statement that individuals have the right to take their own life. However, GPs in the present study were more ambivalent about this statement when

considering the rights of older people, highlighting age-related differences in attitudes. There appeared to be a three-way split in opinion where a third of respondents agreed with the statement, a third disagreed, and the remaining third were uncertain.

When looking at the qualitative responses following this question it seems that the statement stimulated interesting debate. One participant stated that no one had "the right" to take their own life stating, "It is not illegal, but it is not right". The majority of participants, however, expressed that under certain mitigating circumstances anyone, regardless of age, had the right to take their own life (the only exception being where a person has a mental illness).

Similar findings have been reported in previous research, which demonstrates that a key principle for health care practitioners on whether a person has the right to take their own life is the presence of terminal illness or high physical burden of disease in the absence of mental illness (e.g., Herron et al, 2001; Rich & Butts, 2003). These debates are currently echoed in recent Parliamentary discussion surrounding an Assisted Suicide Bill that has been presented to the Scottish Parliament.

Legalising assisted suicide raises a number of important questions in relation to its use with older people. For instance, should an older person be assisted to commit suicide in the absence of a terminal illness? This question will become more pertinent as our population ages. For example, although older people are living longer, they are also more likely to experience negative life events and ailing physical health (Baltes & Smith, 2003). This in turn may give rise to greater numbers of requests for assisted suicide. In the Netherlands, where assisted suicide has been legalised, there have been approximately 400 requests for physician assisted suicide by older people in the absence of severe disease (Rurup *et al.*, 2005).

Furthermore, there is concern that legalising assisted suicide may result in older people feeling a "duty to die" in order to avoid becoming a burden to their family and society as a whole (Ott, 1998). This may be compounded by an increased pressure on health and social care services as a result of an ageing population. That said, many commentators also point to the contribution older people make to our society: for example, in their role as grandparents, unpaid carers and volunteers, older people save the UK £24 billion per year,

while boosting the economy a further £245 billion per year in consumer spending (Meadows & Volterra Consulting, 2004).

4.2.2.4 Motivation behind a Suicide Attempt

According to Herron *et al.* (2001), GPs, out of all the other frontline professional groups, were most likely to view a suicide attempt as having an "attention seeking" component. The present study does not support this finding as the vast majority of participants (94%) did not view a suicide attempt in an older person as a ploy for attention. Methodological differences between the two studies may account for this discrepancy, particularly the current study's focus on suicide prevention within older populations.

Research suggests that a suicidal act by an older person is less likely to be intended to impact negatively on another person whereas in younger age groups such actions can be a way of expressing distress without the actual intention of dying (Secouler, 1998). Furthermore, the belief that suicide in older people is understandable may alter perceptions as to the motivation behind the act where an attempted suicide may be viewed as a response to ageing rather than constituting an attentional component.

4.2.2.5 GPs' Role in Suicide Prevention with Older People

Despite the expression of some negative and erroneous beliefs, a large proportion of GPs in the present study saw a clear role for suicide prevention in older people within primary care. Similar findings have been reported in previous research exploring GPs' attitudes to depression in later life where GPs accepted responsibility for the identification and treatment of this disorder (Callahan *et al.,* 1996). However, seeing a role did not necessarily equate with pro-active clinical practice. Callahan *et al.* also reported perceived barriers to clinical practice which can adversely impact on service provision, including a GP's lack of confidence in clinical skills and the time-limited nature of clinical appointments. It was therefore important to explore whether similar barriers influenced GPs' ability to adequately assess for suicide ideation in an older patient within the present study. A discussion will now be presented regarding GPs' responses to the Self-Reported Clinical Practice sub-scale of the research questionnaire.

4.2.3 Self-Reported Clinical Practice

The Self-Reported Clinical Practice Scale demonstrated reasonable internal consistency and reliability, as indicated by Cronbach's alpha. Exploratory factor analysis also indicated that the scale measures a uni-dimensional construct highlighting the theoretical coherence of its use for the purpose of testing the current research hypotheses. Both the scree plot and parallel analysis clearly indicated a one-factor solution, which is arguably more accurate in identifying the dimensionality of a scale compared with Kaiser's criterion (Costello & Osborne, 2005; Velicer & Jackson, 1990).

A discussion regarding the responses to the items on the scale will now be presented.

4.2.3.1 Conducting Suicide Risk Assessments

Research suggests that the expression of psychological distress during a clinical contact is the biggest predictor of whether a physician will conduct a suicide risk assessment (Mays, 2004). Clients who did not overtly discuss suicidal intent, but who displayed the relevant risk factors, were less likely to have a suicide risk assessment conducted than those who expressed their wish to die. Such findings highlight potential barriers to adequately recognising and responding to distress, particularly as older people tend not to overtly discuss suicidal thoughts (Isometsca, Heikkinen & Marttunen, 1995). In the present study, however, the majority of GPs felt that it was possible to assess for suicide risk in older people.

When asked to report how often they conduct a suicide risk assessment with older patients, over half of the participants reported that they would "sometimes" carry out such an assessment. A very small number admitted to never conducting a risk assessment (1%) while only 3% reported always assessing risk in older people. The responses to this question may not be a true representation of GPs' actual clinical practice as there appeared to be some ambiguity as to the meaning of the question. A number of participants questioned whether the statement related to carrying out risk assessment with *every* older patient or only those with mental health issues (the questionnaire sought views on the former). It may have been more informative to provide specific timescales (i.e. every visit, every month, every year, or only when indicated?) or include follow-up questions, such as

asking what factors participants deemed important when conducting a risk assessment (e.g. mental state, risk factors such as previous suicide attempts, or intuition).

Despite such ambiguity, the findings highlight that assessing for suicide risk in older populations is not routinely conducted in clinical practice. Furthermore, over half of participants reported that they were more likely to conduct a risk assessment for younger people. Previous research suggests that GPs tend to hold erroneous beliefs that younger people benefit more from psychotherapeutic interventions, and therefore may be less likely to make attempts to identify risk in older people (Callahan, Dittus & Tierney, 1996; Uncapher & Arean, 2000). These beliefs are contrary to research that shows older people actually respond as well if not better following appropriate psychological intervention and are more receptive to a psychological approach as a result of emotional maturation (Beautrais & Mishara, 2007).

4.2.3.2 Perceived Ability to Conduct Suicide Risk Assessment with Older Patients

According to Pearson and Brown (2000), primary care practitioners tend to spend less time per clinical appointment with older people compared with younger age groups and often prioritise physical health problems to the exclusion of mental health difficulties. A similar finding was reported in the current study where over half of the GPs surveyed felt that older people had too many physical health problems, meaning that suicide was not always considered. Furthermore, they were more likely to conduct a suicide risk assessment with older age groups, suggesting that more time is allocated to younger age groups in order to address psychosocial as well as physical concerns.

Discussing symptoms of depression can increase the time involved in physician-patient contact (Badger et al, 1994). It is perhaps not surprising then that the time-limited nature of consultations has been identified as a barrier to effective recognition and intervention of late-life depression (Banazak, 1996). Within general practice in the UK, GPs have on average an eight-minute window of opportunity to address presenting physical complaints while also attempting to decipher any unspoken psychological distress (Deveugele *et al.*, 2002). According to Howie, Porter and Forbes (1989) shorter consultations (under 10 minutes) adversely impact on patient care, particularly with respect to addressing

psychosocial concerns. This may be compounded for older people who tend to present with multiple physical ailments, as previously discussed.

Previous research has also identified a lack of confidence among GPs with regards to identifying and adequately treating late-life depression (Callahan, Dittus & Tierney, 1996; Rothera, Jones & Gordon, 2002). Studies assessing the actual clinical practice behaviour of primary care practitioners unfortunately suggest this lack of confidence is justified (Crawford *et al.,* 1998; Uncapher and Arean, 2000). Comparable findings were evident in the present study where over half of the respondents expressed feeling uncomfortable assessing suicide risk in older people, with a similar proportion also expressing the need for further training in this area.

A lack of perceived ability to carry out a particular behaviour has been shown to reduce the likelihood of that behaviour being carried out (Ajzen, 1985). Therefore, both the perceived lack of time within clinical practice to adequately address mental illness in older people, combined with a lack of confidence in this area, reduces the probability of assessing for suicide risk within this population.

The chapter thus far has provided a useful assessment of the range of attitudes and self-reported clinical practice behaviours of primary care practitioners with regard to suicide prevention in older people. The remainder of this section will consider the results of the current study with respect to the research hypotheses in order to further enhance understanding of potential barriers to reducing suicide rates in older populations within the context of primary care.

4.3 Hypothesis 1: GPs' attitudes towards suicide prevention in older people will correlate with self-reported clinical practice in terms of risk assessment within this population.

Negative attitudes towards suicide prevention in older people, in themselves, are not necessarily problematic. What may give rise to concern is where these attitudes adversely influence clinical practice to the detriment of managing a suicidal older adult patient.

Attitudinal research suggests that the more negative an attitude towards a particular behaviour, the less likely an individual is to perform that behaviour (Armitage & Conner, 2001; Rathus, 1990). This is supported by studies exploring the role of attitudes in the clinical practice behaviours of primary care practitioners. For example, Callahan *et al.* (1992) reported a positive correlation between negative attitudes towards the ageing process and the recognition and treatment of late-life depression. The present study also demonstrated a correlation between attitude towards suicide prevention in older people and clinical practice where more negative attitudes resulted in less proactive risk assessment, although this only constituted a low to moderate effect size.

A comparison of the total mean scores indicates that although GPs held negative attitudes, they scored more positively in terms of self-reported clinical practice. Indeed previous research suggests that an individual can hold a negative attitude, while simultaneously behaving in a positive manner (Fishbein & Ajzen, 1975). Such findings highlight the importance of considering other factors that may influence the relationship between attitudes and behaviour.

Ajzen (1985) argued if an individual believes they do not have the resources or opportunities required to carry out the behaviour, then they are unlikely to form the "behavioural intention" to carry out that behaviour, which has been termed "perceived behavioural control". The current research provides further support for the mediating role of perceived behavioural control in terms of the behavioural expression of an attitude. For example, a GP's belief that psychological distress in older people is "understandable" and a perceived lack of time to adequately assess suicide risk within this population combine to mean that he or she is less likely to conduct a risk assessment.

Furthermore, the present study highlighted that the majority of GPs are more likely to conduct a suicide risk assessment with younger people, most likely due to erroneous beliefs and negative attitudes towards suicide prevention in older people. This suggests that the lack of perceived behavioural control identified in the present study is specific to clinical work with older people as opposed to younger patients.

A further mediating factor regarding the behavioural expression of attitudes may be the emotional experience of GPs when working with older people in distress. According to

Ellis (1962) the emotional experience of a given behaviour influences the beliefs with regards to performing that behaviour. Research indicates that working with an actively suicidal patient evokes high levels of emotion in practitioners (Richards, 2000). It could be hypothesised that these feelings are compounded for medical practitioners whose training and whole practice ethos is to preserve life. The emotional experience of GPs was not specifically addressed in the present study, although the majority did report feeling uncomfortable assessing suicide risk in older people, as previously indicated. Further research could explore the extent to which emotional experiences influence attitudes and behaviour within clinical practice with regards to preventing suicide in older people.

4.4 Hypothesis 2: There will be a difference in scores between GPs who have experienced suicide in older people compared with GPs with no such experience in terms of attitudes towards suicide prevention and self-reported clinical practice within this client group.

Attitudinal research has highlighted the mediating role of direct experience of the attitude object and the attitude-behaviour relationship (Fazio, Zanna & Cooper, 1978). Furthermore, according to Fazio (1990) attitudes that are readily accessible from memory or which hold greater personal relevance are more likely to affect behaviour. Therefore an individual is more likely to give careful consideration to a matter if it is personally significant to them. It was therefore hypothesised that GPs who had experienced a suicide in an older person would express different attitudes and self-reported clinical practice compared with GPs with no such experience. However, statistical analysis did not support this hypothesis.

The lack of support for the mediating role of direct experience within the present study suggests attitudes pertaining to suicide prevention in older people may be influenced by alternative factors. Consideration of individual items within the attitude sub-scale provides some indications as to potential influencing factors. For example, there was a statistical difference between the two groups (GPs who have experienced a completed suicide in an older patient versus GPs with no such experience) in relation to the statement "Suicide in older people is understandable" where those who had experienced a suicide were more

likely to agree with this statement. Attitudinal research exploring the function of attitudes may explain this difference.

According to Katz (1960) attitudes serve a protective function in that they can preserve an individual's self-esteem in situations where it might otherwise be compromised. Having experienced a completed suicide a physician may externalise this experience in order to protect their self-worth as a clinical practitioner. Therefore the death of an older patient to suicide is viewed as a natural consequence of the ageing process rather than a negative reflection of their clinical practice. The present findings also demonstrate how this theory may influence the reporting of clinical practice behaviours in terms of conducting a suicide risk assessment with older patient groups.

There was also a statistical difference when considering experience of completed suicide in an older patient and the need for further training in this area. GPs who had experienced suicide in an older person were less likely to view the need for training in this area. This is in contrast to GPs who had no such experience with almost half recognising a need for further training. When considering Katz (1960) ego-defence function of attitudes it could be surmised that expressing the need for further training in suicide prevention by GPs who had an older patient commit suicide would be perceived as suggesting that the death was related to a lack of clinical skill or knowledge.

4.5 Hypothesis 3: GPs who have received training on suicide risk assessment will have more favourable attitudes towards suicide prevention in older people and will be more likely to conduct such assessments with this client group.

According to Herron et al (2001) practitioners who have received training in suicide risk assessment are more likely to demonstrate positive attitudes towards suicide prevention. In the present study, however, statistical analysis did not reveal differences between those who had received training in suicide compared with those who had no such training with regards to attitudes towards suicide prevention in older people.

The difference between the two studies may be related to the type of training received. When looking at the qualitative information gathered from the questionnaire from the

current study, it seems that the majority of participants had training on suicide risk assessment during their under-graduate and post-graduate training (in some instances this was more than 30 years ago) or while working as a trainee doctor in psychiatry. A very small number had received specific suicide training since becoming General Practitioners (approximately 3%). This is despite Government targets in training 50% of front-line staff in suicide risk assessment by 2010. Furthermore, according to Coryell (1987), psychiatric knowledge and skills gained through initial training may be undermined over the years due to the influence of negative attitudes evident within the NHS.

Interestingly there was a significant difference between the two groups when considering self-reported clinical practice where those who had previous training in suicide reported more pro-active suicide risk assessment behaviours. This suggests that training practitioners in suicide risk assessment may positively impact on clinical practice, but does not alter attitudes towards suicide prevention. Therefore training experience does not mediate between attitude and behaviour.

4.6 Hypothesis 4: Older GPs will have more positive scores in terms of attitudes towards suicide prevention in older people compared with younger participants.

Previous research investigating the influence of an individual's age on attitudes towards growing old has produced mixed results. A meta-analysis of 232 studies indicates, however, that older people are more likely to hold positive attitudes towards ageing than their younger counterparts (Kite *et al.,* 2005). Furthermore, according to Fishbein (1998), there is a relationship between the age of an individual and attitudes towards performing a particular behaviour. It was therefore hypothesised that older GPs would express more positive attitudes towards preventing suicide in older people as they will have developed a greater understanding and empathy towards older patients.

Statistical analysis did reveal differences between the various age groups, although not in the direction hypothesised. The findings indicate that younger participants held more positive scores in terms of attitudes towards suicide prevention in older people. According to Secouler (1998) older GPs may over identify with older patients and therefore find addressing such difficulties problematic.

The findings indicate that older participants in the present sample may have been influenced by general cohort beliefs evident in society where psychological distress is viewed as an understandable reaction to ageing (Murray *et al.*, 2006, O'Connell *et al.*, 2004; Quinn *et al.*, 2009). This is supported by previous research which suggests that older GPs are more likely to view depression as a natural consequence of old age compared with younger counterparts (Collins, Katona & Orrell, 1995). Further research is required to investigate a potential relationship between attitudes to suicide prevention in older people and more general attitudes towards the ageing process among older primary care practitioners, as discussed in Section 4.9.1.

The more positive attitudes of younger GPs might also be explained by the shorter period of the time that has elapsed since formal training. As mentioned above, the majority of participants had training on suicide risk assessment during their under-graduate and post-graduate training or while working as a trainee doctor in psychiatry. Insofar as this training will be fresher for younger GPs, it might go some way to explain their more positive attitudes to suicide prevention, particularly as institutional norms can undermine initial training over the years (Coryell, 1987). This might also support the idea that GPs should be required to demonstrate clinical competence throughout their careers through a process of revalidation and continuing professional development[5] (Royal College of General Practitioners, 2010).

Age related differences may also reflect changes in health policy and practice that have occurred in Scotland over the last couple of decades. For example, there has been a greater focus on the mental health and well-being of older people and on reducing age related discrimination (as reflected in the Framework for Mental Health Services in Scotland, 1997 and the National Programme for Improving Mental Health and Wellbeing, 2003). Younger GPs may have developed more positive attitudes in response to recent changes institutional norms. Older GPs, in contrast, may be more attached to pre-existing attitudes towards ageing and mental illness developed during their initial general practice training (Garland, 1996).

[5] Revalidation refers to the single, integrated process by which doctors will require to evidence their ability to practise medicine. The process will involve relicensure and recertification every 5-years for all GPs. It is planned to take effect in April 2011.

4.7 Clinical Implications

The findings from the present study highlight the complex nature of suicide prevention in older people within primary care, which requires a multi-level approach. At an individual level it is important to understand how attitudes towards suicide and ageing affect both health seeking behaviours and clinical practice. At a group level it is important to assess how institutional norms may impact on service provision and the potential barriers to the recognition of suicide risk in older populations. At a public health level it is crucial to make attempts to reduce the stigma of suicide and discrimination against older people through population-wide campaigns, public policy and legislation as well as develop strategic planning to ensure sustainable services for an ageing population. Clinical psychology plays a crucial role at each of these levels, as will be demonstrated.

4.7.1 Individual Level: Enhancing Clinical Knowledge and Skills in Primary Care Practitioners

Attempts to reduce suicide rates in older people may be hindered by negative attitudes towards health and wellbeing in old age, particularly the belief that depression and suicidal ideation are an "understandable" reaction to the ageing process. Therefore, an important area for intervention may be at an individual level, such as enhancing the skills and knowledge of GPs through training. Furthermore, it may be pertinent to educate health-care providers not only about the signs and symptoms of depression and suicidal ideation but also features of healthy ageing in order to challenge erroneous beliefs. This is particularly important in light of the current findings, which indicate that such beliefs adversely impact on clinical practice resulting in distressed older adults not being identified and appropriately treated.

Training general practitioners to assess and treat depression in older people can help address the gap between knowledge and practice (Bruce *et al.*, 2004), which in turn can have a positive effect on reducing suicide rates (e.g., Rutz *et al.*, 1989). The GPs in the present study themselves highlighted a need for further training within primary care practice. The study also highlights the importance of training and education in tackling

perceived barriers to conducting risk assessments with this client group, particularly around enhancing confidence in clinical skills.

Morgan and Evans (1994) highlight that when attempting to enhance physicians' skills through training, it is crucial that they have both a positive attitude towards suicide prevention in older people and an acceptance as to their role in reducing suicide rates within this population. In the current study, GPs indicated that they do see a role with regards to suicide prevention in older people, but felt that suicide in a younger population was a more important issue, with suicidal ideation in an older person being viewed as an "understandable" reaction to the ageing process. It could be postulated that practitioners who hold such attitudes may be less likely to participate in training in this area – and if they do participate, less likely to adopt the clinical practice promoted. The Attitude towards Suicide Prevention in Older People scale may prove a useful tool in which to assess attitudes in order to promote the benefits of training to otherwise reluctant participants. The scale may also be useful in assessing attitudinal change post-training.

Morriss *et al.* (2005) demonstrated that although training initiatives can enhance primary care practitioners' skills in suicide risk assessment and immediate management of suicidal ideation, such training does not impact on suicide rates. This suggests that training initiatives, on their own, may not sufficiently impact on suicide rates.

4.7.2 Addressing Barriers to Clinical Practice

The perceived external barriers to conducting risk assessments with older people could be addressed within wider service provision. For example, it may be necessary to consider offering older patients double appointments in order to adequately address all aspects of health and wellbeing. This is particularly pertinent in light of the findings from the current study. Participants reported that older people tend to present with multiple physical health problems that there is not always time within clinical appointments to consider mental ill health or suicide risk.

Research does indicate that increasing consultation length can enhance quality of care for patients. Hutton and Gunn (2007) conducted a systematic review of the literature

investigating the length of clinical appointments and the management of psychological problems within primary care. They found that increasing consultation length can lead to more expansive discussions regarding psychosocial issues resulting in better clinical outcomes. In particular longer appointments resulted in more accurate diagnosis of depressive disorders. Methodological constraints within this research make it difficult to conclude whether this relationship would also apply to increasing consultation times with older populations.

Deveugele *et al.* (2002) investigated the relationship between attitudes of GPs with regard to mental illness in the general population and the length of consultation offered. They reported that GPs with more positive attitudes towards mental illness are more likely to offer longer appointment times. The findings from the present study, however, suggest that increasing appointment times for older people may not necessarily equate with more discussion around psychological issues. It could be hypothesised that practitioners may use this time to focus more on physical illness to the exclusion of factors associated with poor mental health as a result of the ageist attitudes highlighted within the current findings.

In conclusion, strategic planning of services in order to address perceived time barriers in identifying psychological distress in older people will need to ensure additional factors, such as attitudes towards ageing and beliefs around appropriate clinical practice with this patient group, are taken into consideration.

4.7.3 Public Health Approaches

4.7.3.1 Screening Measures

Beeston (2006) argues that the detection of suicidal ideation is a major component with regard to secondary prevention of suicide within older age groups. One way to approach this task may be to introduce targeted screening programmes in order to minimise the impact of attitudes on conducting risk assessments.

Recent research from Japan, which has one of the highest rates of suicide among older adults, suggests that depression screening within primary care can reduce suicide rates for

both older males and females (Oyama *et al.,* 2004). However, there must be appropriate follow-up once a person has been identified. This creates an ethical dilemma for health boards and providers as such wide-scale screening may result in a greater number of older people being identified as requiring treatment for depression without the appropriate service provision in terms of accessing psychological interventions.

According to Schade *et al.* (1998) increased screening efforts do not necessarily lead to improved treatment. This may be related to negative attitudes towards ageing where older people are deemed less responsive to psychological intervention, despite research suggesting the contrary (Callahan, Dittus & Tierney, 1996; Uncapher & Arean, 2000). It may be necessary, therefore, to educate primary care practitioners on the evidence-base for the treatment of late-life depression and suicide ideation as well as provide an overview of local mental health services and their referral process.

4.7.3.2 Public Health Policy

Older people's mental health, particularly with respect to suicide prevention, has long been a neglected area both in terms of public health policy and service provision (Ronald, 2008). Nonetheless, there have been recent attempts to develop age inclusive policies that address the mental well being of everyone within society, as well as a more general legislative agenda that places age equality duties on public bodies (e.g. Equality Bill, 2009).

Public Health has a key role in influencing public policy and legislation in an attempt to reduce suicide rates in older people. The overall aim is to reduce the stigma of mental ill-health and tackle age discrimination, which can be barriers to older people seeking help for psychological distress as well as GPs' ability to recognise and respond to such distress. GPs who share this vision could take the lead and encourage change within their individual practice.

Service provision may also need to reflect recent policy by becoming age inclusive. Indeed, it may be more appropriate to base services on need rather than an arbitrary age cut off point in order to de-stigmatise the ageing process. The current findings suggest that for such an approach to be successful it would require a cultural shift in terms of the attitudes of front line practitioners towards mental illness and the ageing process.

Previous research indicates that when suicidal ideation in an older person is identified, they are not necessarily referred on to mental health services. By contrast, a younger person with a similar presentation is more likely to receive treatment or referral on to mental health services. Given limited resources and the need to prioritise cases, GPs' attitudes towards the relative ineffectiveness of intervention for older age groups might militate against principles of equal access across age groups. Indeed, research into the inclusivity of services within the UK supports this postulation where older people are often not referred on to such services (The Department of Health, 2004).

It could be argued that moving away form specialist older adult services may result in issues specific to older age groups being overlooked. For example, older people tend to present to primary care with multiple physical problems as well as mental health difficulties. This necessitates a complex assessment and formulation requiring specialist knowledge of the interaction between physical and psychological health (Knight & Poon, 2008). This is supported by the Geropsychology practice guidelines from the American Psychological Association (2004), which stipulates that the assessment and treatment of older adults experiencing psychological distress requires specialist input due to the phenomenology of mental illness and therapeutic change, which can alter across the lifespan.

Workforce planning may also require consideration in any strategic redesign initiative given the low numbers of applied psychologists specialising in the psychology of older adults (NHS Education for Scotland & Information Services Division, 2009). Indeed, the provision of psychological services has also been subject to recent review in order to address the gap between demand and supply, which will increase as our population ages (Wells, 2009). Some of the suggestions from this paper will be discussed below.

4.7.4 The Role of Clinical Psychology

Clinical psychology plays a crucial role across multi-level approaches in suicide prevention in older people. There is a growing evidence-base for individual psychological interventions for late-life depression and suicide, as discussed in Section 1.7.2. Furthermore, their advanced knowledge and skills means Clinical Psychologists,

particularly those specialising in older people, are well placed to provide training, education and consultation to the wider work-force in order to enhance access to psychological based interventions (Wells, 2009).

According to Bhutani (2008) given GPs reluctance to refer older people for psychological support, it may be necessary to engage with primary-care teams utilising a number of approaches to enhance the detection and treatment of older people experiencing psychological distress. In addition to offering a direct clinical service, psychologists may need to utilise their enhanced skill in fostering inter-professional relationships while articulating the benefits of a psychological approach to a potentially reluctant audience due to indirect and direct negative attitudes and erroneous beliefs outlined within the present study.

Where psychologist may be able to provide the most significant contribution, however, is by adopting a public health perspective. Examples of how psychology has been contributing to a Public Health department include influencing public policy by attending stakeholder events and providing a specialist psychological perspective with regards to the strategic planning of services for older people. Psychologists can also harness specialist psychological knowledge of behaviour change to encourage a change in clinical practice as well as to inform public campaigns to ensure their effectiveness.

4.8 Strengths and Limitations of the Study

The present research is unique within the field of suicide research as no studies to date have looked at attitudes towards suicide prevention in older people within primary care, despite this being a growing area in terms of policy and service provision. Furthermore, the large sample size allowed the statistical analysis to be sufficiently powered at the highest level, while endeavouring to obtain a sample representative of General Practitioners within the chosen health board area.

Measuring attitudes and self-reported clinical practice in the present study has provided a useful insight into potential barriers to recognising and responding to psychological distress in older people. Furthermore, we can be confident in the questionnaires' ability to

reliably measure primary care practitioners' attitudes towards suicide prevention in older people and clinical practice regarding risk assessment with this client group.

Modifying the original Attitudes to Suicide Prevention Scale by Herron et al (2001) in order to focus on older people did not adversely affect the scales internal consistency. The Self-Reported Clinical Practice Scale (SRCP) also demonstrated good psychometric performance and measured a theoretically coherent uni-dimensional construct.

The study is not without limitations, which will now be outlined along with suggestions for further research.

4.8.1 Response Bias

GPs with an interest in older peoples' mental health may have been more likely to respond to requests to participate in the present study. This is supported by research which suggests non-responders tend to find the research area uninteresting or irrelevant (McAvoy & Kaner, 1996). Furthermore, a high percentage of participants in the present study had received training in geriatric medicine and old age psychiatry (59% and 25% respectively) suggesting an interest in the provision of care to older people. It is not clear whether this training was part of core general practice training that all GPs receive or additional experience sought out as a result of a specialist interest in the area. Perhaps further research may wish to provide opportunity to record this distinction.

Although the present study achieved a high level of power, it could be argued that a response rate of 49% is too low to allow the findings to be generalised to all general practitioners (Templeton *et al.,* 1997). Templeton et al conducted a study to explore the validity of a 44% response rate following a postal-survey of GPs regarding their practice behaviour with alcohol dependent patients by assessing potential non-response bias. They followed up GPs who did not respond to the original questionnaire by telephone. The results suggest that GPs who were more confident with the subject matter were less likely to respond to the postal questionnaire. They also reported feeling better supported to work with this patient group compared with participants who replied with the postal questionnaire. It could be concluded that a crucial body of expertise is being missed as a

result of modest response rates. Consequently, the present study looked to enhance response rates by utilising a variety of evidence-based approaches, such as introducing a small financial incentive (Coogan & Rosenberg, 2004), and personalising correspondence (Edwards *et al.,* 2002).

Social desirability may also have produced a response bias, particularly as suicide and ageing can evoke strong attitudes in either direction. The present study attempted to overcome this by anonymising questionnaires and reassuring participants that their responses would be confidential. A number of GPs expressed very negative attitudes towards suicide prevention in older patients suggesting that they felt safe and in a position to express these views knowing that they would not be identified.

4.8.2 Measuring Clinical Practice and Attitudes

The present research assessed GPs' self-reported clinical practice in terms of conducting suicide risk assessments. Although the scale used to measure clinical practice demonstrated reasonable psychometric properties, research suggests that self-reported behaviour tends to be an overestimation of actual objective reports and as such is less reliable (Armitage & Conner, 2001). Therefore the validity of the current study may have been enhanced by utilising objective measures of clinical practice, such as reviewing practice records and recording incidences where a suicide risk assessment was carried out with an older patient. It may also have been interesting to assess how often clients were identified as being suicidal and what interventions were carried out, as research suggests that even when an older person is identified as experiencing psychological distress, they often do not receive appropriate intervention (Duberstein *et al.*, 1995; Crawford *et al.,* 1998).

Furthermore, some of the items in the Self Reported Clinical Practice sub-scale seem to be related more to clinical "opinion" rather than actual clinical practice, such as question 11b ("it is not possible to assess suicide risk in older people"). This again could have impacted on the validity of the measure. Moreover, a similar criticism may be pointed at the Attitudes towards Suicide Prevention in Older People Scale. It could be argued that the scale is not a pure measure of attitudes to suicide prevention as responses to individual

items may be influenced by perceived knowledge of the area, particularly in relation to items that are open to empirical analysis, such as question 9a ("young people are more likely to commit suicide"). Despite these short comings, the scale did demonstrate reasonable psychometric properties, which may be enhanced further by modifying the individual items in question.

The 5-point Likert scale adopted in the present study may also result in unreliable responses by introducing "central response tendency", where participants are allowed to avoid making definite choice and are able to "sit on the fence" (Voss *et al.*, 2000). This can result in the scale having an inflated alpha estimate compared with even number points. A benefit of offering participants a middle position, however, is that it may allow more honest, consistent and reliable responses (Spiliotopoulou, 2009).

A further criticism that may be pointed to both the Attitudes towards Suicide Prevention in Older People and Self-Reported Clinical Practice sub-scales relates to the individual items adopted to measure these two variables. It could be argued that some of the individual items tap into areas other than attitudes and clinical practice.

4.9 Suggestions for Further Research

4.9.1 Relationship between Attitudes to Ageing and Suicide Prevention in Older People

The current research indicates that GPs tend to view suicidality in older people as an understandable reaction to ageing, as previously discussed. It could be hypothesised that these views may also reflect negative attitudes towards ageing more generally. Empirical research to investigate this clinical hypothesis is currently lacking. Future research could therefore investigate a potential relationship between primary care practitioners' attitudes to suicide prevention in older people, as measured by the Attitudes towards Suicide Prevention in Older People Scale (ASPOP) with measures assessing attitudes to ageing, such as the General Attitudes to Ageing Questionnaire (O'Hanlon & Coleman, 2000).

The findings from the present study also indicated that older GPs tend to hold more negative attitudes towards suicide prevention in older people compared with younger GPs. The impact of cohort effects on the development of such attitudes could be explored further by conducting a correlation analysis investigating the relationship between responses to the ASPOP and more specific measures of attitudes to ageing within older populations, such as the Attitudes to Ageing Questionnaire (AAQ) developed by Laidlaw *et al.* (2007). The AAQ provides a comprehensive assessment of older people's attitudes to the process of ageing and demonstrates good psychometric properties.

4.9.2 Combining Classical and Modern Psychometric Models

The Self-Reported Clinical Scale was developed for the purpose of testing the current research hypotheses and demonstrated adequate psychometric performance, based on classic psychometric models, necessary for this role. The exploratory factor analysis highlighted that the scale measures a uni-dimensional construct, as discussed. Therefore, future research could use inter-item theory, such as Rasch (1966) analysis, in order to further explore its use as a theoretically coherent measure of primary care practitioners' clinical practice with regards to assessing suicide risk in older people. Previous research has demonstrated that combining classical and modern psychometric models in this way provides a powerful methodology in investigating the psychometric performance of a measure (Laidlaw *et al.,* 2007; Power *et al.,* 2005).

4.9.3 The Impact of Targeted Training on Attitudes and Self-Reported Clinical Practice

Currently there is a training programme underway in Scotland in order to meet the Government target to train 50% of frontline staff by 2010 in suicide risk assessment. The current research may be used as a baseline for attitudes and practice behaviours within GPs in order to assess the impact of training programmes on both of these areas post training.

The current research demonstrated a correlation between attitudes towards suicide prevention in older people and self-reported clinical practice, as discussed. However,

previous training in suicide risk assessment did not impact on attitudes towards prevention. Future research could explore whether interventions specifically targeting attitudes would result in behaviour change.

Furthermore, it could be hypothesised that GPs with negative attitudes towards suicide in older people may be less likely to attend training initiatives related to this area. Further research is required to empirically test this clinical hypothesis. It would also be interesting to explore whether targeting training to specific groups would enhance participation. For example, potential trainees could be stratified to various training models based on their attitude to suicide in older people and knowledge in this area in order to compare the impact of training and to explore factors that may influence the uptake of training.

4.9.4 Mediating Role of Emotional Experience

The majority of GPs in the present study expressed feeling uncomfortable assessing for suicide risk in older patients. It would have been interesting to explore further the emotional experience of GPs when working with older people in distress in order to assess the impact of emotions on attitudes and clinical practice behaviour. It has been postulated that the emotional experience of a given behaviour (e.g. conducting suicide risk assessments with older people) can influence intentions to perform this behaviour (Ellis, 1962). Further research could therefore explore whether emotions impact on attitudes and clinical behaviour by utilising a path analysis.

4.10 Conclusions

Suicide is a serious public health concern. Worldwide rates of suicide are increasing, particularly within older populations. Furthermore, older people are significantly more likely to die as a result of a suicide attempt with depression constituting the greatest risk factor for this population. Despite the fact that older people are more likely to visit their General Practitioner, depression often goes unrecognised and untreated. The present study provides a unique insight into the potential barriers to health-seeking behaviour and service

provision with regards to suicide prevention in older people with a particular focus on the relationship between GPs' attitudes and clinical practice.

The Attitudes towards Suicide Prevention in Older People Scale indicated that, on the whole, GPs attitudes were only marginally negative in nature. However, exploration of responses to the individual items on the scale highlighted potentially erroneous beliefs. In particular, the majority of GPs surveyed indicated that suicidal ideation in older people was an "understandable" reaction to the ageing process. Perceived barriers to conducting suicide risk assessments with older people were also identified, including the time-limited nature of clinical appointments and the multiple physical problems older people often present with. As such, mental health issues are not always considered. These barriers to clinical practice often result in distressed older adults not being identified and referred on to appropriate mental health services.

A number of important clinical implications were highlighted with respect to the effective enactment of health policy regarding the reduction of suicide rates in older populations. These implications were presented as part of a multi-level approach, involving discussion about the enhancement of skills and knowledge of individual practitioners, as well as the role of national public health campaigns in reducing the stigma of mental illness and the importance of challenging negative attitudes towards the ageing process. Clinical psychology can contribute an important role at each of these levels by combining a public health approach with traditional models of working.

Public health psychology may well be at an embryonic stage in its development, but this study demonstrates that its role and value will only increase as a means of improving clinical practice and delivering better outcomes for some of the most vulnerable people in our society.

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6. APPENDICES

Appendix 1	**Initial E-mail Correspondence**
Appendix 2	**Participant Information Sheet**
Appendix 3	**E-Mail Reminders**
Appendix 4	**Research Questionnaire**
Appendix 5	**Original Attitudes to Suicide Prevention Scale**
Appendix 6	**Explorative Analysis of the Data for Hypothesis 2**
Appendix 7	**Explorative Analysis of the Data for Hypothesis 3**
Appendix 8	**Explorative Analysis of the Data for Hypothesis 4**

APPENDIX 1 – Initial E-Mail Correspondence

Dear Colleague,

My name is Lisa and I am a Specialist Psychological Practitioner working in Public Health. As you are aware suicide is an important public health concern and subject to specific HEAT targets (H5), namely to reduce suicide rates and train 50% of frontline staff by 2010 on suicide risk assessment and prevention. Related to this I am currently undertaking research which looks to explore General Practitioners' experience of suicide in older people and their perception of their role in terms of reducing suicide rates within this population. It is hoped that the findings will help promote a better understanding of GPs needs in terms of future training and support with regards to assessing for and preventing suicide within this population. As an informed GP your input would be very much appreciated.

I understand that practices are currently gearing up for an autumn hit of swine flu and that your time is already stretched. However, your participation in the study will ensure the research accurately represents the views of all GPs working across the health board. Participation involves completing a short questionnaire, which was piloted with 6 GPs who found it to be acceptable and quick to complete (it should take no longer than 10 minutes). The questionnaire can be completed and returned in any of the following ways:

1. Complete an on-line version at the following address: https://www.survey.ed.ac.uk/gpsurvey
2. Complete and return the questionnaire via email - please find attached the relevant information.
3. Complete and return a paper copy of the questionnaire.

The easiest and quickest way to complete the questionnaire is online. However, I will be sending out a paper copy of the questionnaire & information sheet by post over the next few weeks. In that I will also enclose two first class stamps for your own personal use as a thank you for taking part in the study. Furthermore, I will of course be happy to present my findings to your practice if this would be of interest.

I look forward to receiving your completed questionnaire. In the meantime, should you require further information about the study, please do not hesitate to get in touch.

Best wishes,
Lisa Ronald

Specialist Psychological Practitioner (Public Health)

APPENDIX 2 – Participant Information Sheet

Dear Colleague,

My name is Lisa and I am a Specialist Psychological Practitioner working in Public Health. I am currently undertaking research evaluating General Practitioners' attitudes to and experiences of suicide in older people and would really value your input. As you are aware suicide is an important public health concern and subject to specific HEAT targets (H5), namely to reduce the suicide rates and train 50% of frontline staff by 2010 on suicide risk assessment and prevention.

Background to the Study

The aim of the present study is to explore General Practitioners' experience of suicide in older people and their perception of their role in terms of reducing suicide rates within this population. It is hoped that the findings will help promote a better understanding of GPs needs in terms of possible future training and support with regards to assessing for and preventing suicide within this population.

What will participation involve?

I have developed a short questionnaire concerned with your current practice and attitudes in terms of suicide risk assessment and prevention in older people, which has been piloted by some of your colleagues. The questionnaire should take no longer than 10 minutes to complete. The questionnaire can be completed and returned in any of the following 3 ways:

1. The quickest and easiest way is by completing an on-line version which can be found at the following address https://www.survey.ed.ac.uk/gpsurvey
2. Complete and return the questionnaire via email
3. Complete and return the enclosed paper copy of the questionnaire in the self-addressed envelope attached via internal mail.

I have enclosed two 1st class stamps for your own personal use as a thank you for taking part in the study.

Ethical Approval and Consent

The current study has been approved by the National Research Ethics Service (NRES) and has undergone internal scrutiny by the ethics panel within the School of Health in Social Science at the University of Edinburgh.

Completing and returning the questionnaire to me will be accepted as consent for taking part in the study. Please bear in mind that as some of you may not wish to record your contact information, it may not be possible to withdraw your questionnaire from the study should you wish to do so at a later date.

What will happen to my results?

All of the data collected will be confidential. Furthermore, in order to ensure anonymity you will not be asked for any identifying information. The findings of the present study will be disseminated through a doctoral thesis in Clinical Psychology and submitted to an academic journal. I will also provide a written summary of the research, along with any recommendations, to the department of Public Health. I am also happy to present my findings to your practice if that would be of interest.

Further Information and Contact Details

If you have any further questions about the study, please do not hesitate to contact me:

Email: lisa.ronald@nhslothian.scot.nhs.uk
Tel: 0131 537 6905

Or for independent advice please contact Prof Ray Miller, Consultant Clinical Psychologist, on Ray.Miller@nhslothian.scot.nhs.uk

APPENDIX 3 – Reminder E-Mails

1st E-Mail Reminder

Dear Colleague,

I recently emailed you regarding a study looking at General Practitioners' views on suicide prevention in older adults. I appreciate that as a profession you are often asked to participate in research studies, so my sincere thanks to everyone who has completed the questionnaire so far.

I hope to receive as many completed questionnaires as possible to ensure that the results reflect the views of all GPs working across NHS Lothian. If you have not already done so, I would be very grateful if you could spare some time to complete the questionnaire (which should take no more than 8 minutes to complete). The quickest and easiest way of taking part in the study is by clicking on the following link: https://www.survey.ed.ac.uk/gpsurvey

You should also receive a paper copy of the questionnaire by post over the next week. In that there are **two first class stamps for your own personal use as a thank you for taking part in the study**. Those who have already participated in the online questionnaire do not need to complete the paper copy, but please accept the enclosed stamps as a thank you.

Please note that the deadline for receiving completed questionnaires is the **30th November 2009.**

Thank you again for your time and I look forward to hearing from you.

Best wishes
Lisa
Specialist Psychological Practitioner in Public Health

2nd E-Mail Reminder

Dear Colleague,

Re: Suicide Prevention in Older People

Once again I would like to take this opportunity to thank everyone who has completed and returned questionnaires for the above study. I hope to provide a summary of the findings over the next couple of months for those of you who are interested. I will also be able to provide my rationale for studying attitudes towards suicide prevention in older people as well as some background information relating to the area, which hopefully you will find interesting. In the meantime, if you would like to discuss any aspect of the research please do not hesitate to contact me.

If you have not yet completed a questionnaire, please do consider taking part. The deadline for completed questionnaires is **Monday 30th November**. You can access the online questionnaire at www.survey.ed.ac.uk/gpsurvey. If you require a paper copy of the questionnaire, please email me on this address and I will send one by internal mail with a return envelope. Alternatively you can print off the attached questionnaire and post it via internal mail to the address below.

Thanks again for your time.

Best wishes
Lisa
Specialist Psychological Practitioner

APPENDIX 4 – Research Questionnaire

General Practitioners' Experience of Suicide in Older People

The following questionnaire is concerned with your current practice and attitudes in relation to suicide in older people. An older person is defined as anyone over the age of 65 years. Please answer the questions as honestly as you can. Your response to the questions will remain confidential. Thank you for your time.

Section 1: Background Information

1. Which age band are you currently in (please circle your answer)?

<30 years 30-40 years 41-50 years 51-60 years 61+ years

2. Please indicate how many years experience you have working as a GP (e.g. 5)

3. Have you ever received any general training on suicide (please circle your answer)?

Yes No

Please give details:

4. Have you ever received any specific training on suicide in older people (please circle)?

Yes No

Please give details:

5. Have you received any training in the following areas (circle all that apply):

General Psychiatry Geriatric Medicine Old age psychiatry No such training

6. How often do you experience the following behaviours in older patients (highlight your answer by placing an X in the box):

	Never	Very occasionally	Sometimes	A lot of the time	Comments
a. Suicidal ideation, but not attempt					
b. Attempted suicide					

7. Have you ever had an older patient commit suicide?

Yes No

Section 2: Attitudes towards Suicide Prevention in Older People

This part of the questionnaire is interested in your attitudes towards suicide prevention in older people. Please be as honest as you can

8. What percentage of suicides in older people do you consider preventable (0-100%)? Please give a numerical answer (e.g. 50)

Continued on next page

9. Please indicate how much you agree with the following statements (highlight the response that most reflects your views by placing an X in the box):

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree	Comment
a. Young people are more likely to commit suicide than older people						
b. Suicide prevention in older people is not my responsibility						
c. Making more funds available to the appropriate health services would make no difference to the suicide rate of older people						
d. Working with suicidal patients is rewarding						
e. If older people are serious about committing suicide, they don't tell anyone						
f. I feel defensive when people offer advice about suicide prevention in older people						
g. It is easy for people not involved in clinical practice to make judgments about suicide prevention						
h. If an older person survives a suicide attempt, then this was a ploy for attention						
i. Older people have the right to take their own lives						
j. Suicide prevention measures for older people are a drain on resources which would be more useful elsewhere						
k. There is no way of knowing who is going to commit suicide						
l. Suicide in older people is understandable						
m. Suicide prevention would be more successful with younger people than older people						
n. I resent being asked to do more about suicide in older people						

Section 3: Clinical Practice in Relation to Suicide Risk Assessment in Older People

This part of the questionnaire is interested in your clinical practice in relation to conducting a suicide risk assessment with older patients.

10. How often do you assess for suicidal risk in an older patient (please circle your answer)?

Never Almost never Sometimes Most of the time All of the time

Continued on next page

11. Please indicate how much you agree with the following statements (please place an X in the box that most reflects your response):

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree	Comment
a. I am more likely to assess suicide risk in a young person than a older person						
b. It is not possible to assess suicide risk in older people						
c. I need more training in assessing suicide risk in older people						
d. I feel comfortable assessing suicide in older people						
e. I am too pressed for time to routinely assess suicidal ideation in older people						
f. Older patients have so many physical problems that I don't always have time to consider suicide risk						
g. Assessing suicide intent in older people is best left to geriatric psychiatrists						
h. Assessing for suicidal intent automatically places the responsibility for treatment on me						

Contact Details

If you would you like feedback on the results of the study please provide your contact details below

Contact Information

Your contact details will not be recorded with the information gathered from this questionnaire.

Name: .....

GP Practice: .....

E-mail: .....

Tel: .....

Thank you!

Thank you for taking the time to complete this survey. If you would like to know more about the study, you can contact me on the following email address: lisa.ronald@nhslothian.scot.nhs.uk

APPENDIX 5 – Original Attitudes to Suicide Prevention Scale (Herron *et al.*, 2001)

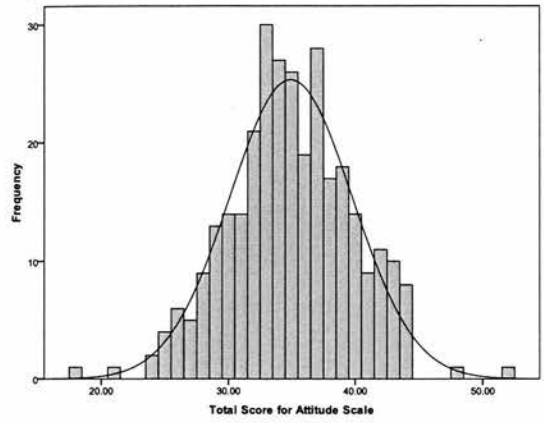
Statement
1 = strongly disagree
2 = disagree
3 = uncertain
4 = agree
5 = strongly agree

Item	Strength of Agreement				
1. I resent being asked to do more about suicide	1	2	3	4	5
2. Suicide prevention is not my responsibility	1	2	3	4	5
3. Making more funds available to the appropriate health services would make no difference to the suicide rate	1	2	3	4	5
4. Working with suicidal patients is rewarding	1	2	3	4	5
5. If people are serious about committing suicide they don't tell anyone	1	2	3	4	5
6. I feel defensive when people offer advice about suicide prevention	1	2	3	4	5
7. It is easy for people not involved in clinical practice to make judgements about suicide prevention	1	2	3	4	5
8. If a person survives a suicide attempt then this was a ploy for attention	1	2	3	4	5
9. People have the right to take their own lives	1	2	3	4	5
10. As unemployment and poverty are the main causes of suicide, there is little that an individual can do to prevent it	1	2	3	4	5
11. I don't feel comfortable assessing someone for suicide risk	1	2	3	4	5
12. Suicide prevention measures are a draw on resources, which would be more useful elsewhere	1	2	3	4	5
13. There is no way of knowing who is going to commit suicide	1	2	3	4	5
14. What proportion of suicides do you consider preventable (None-All)					

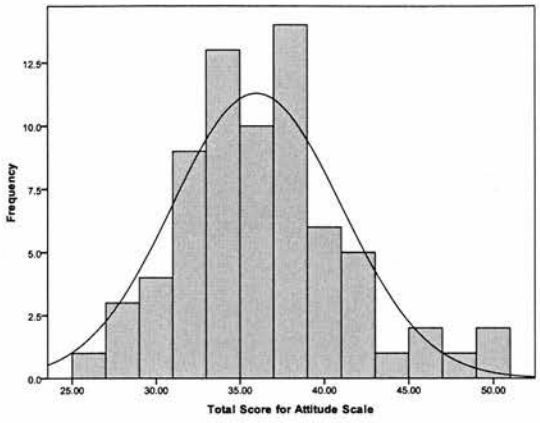
APPENDIX 6 – Explorative Analysis of the Data for Hypothesis 2

Attitudes to Suicide Prevention

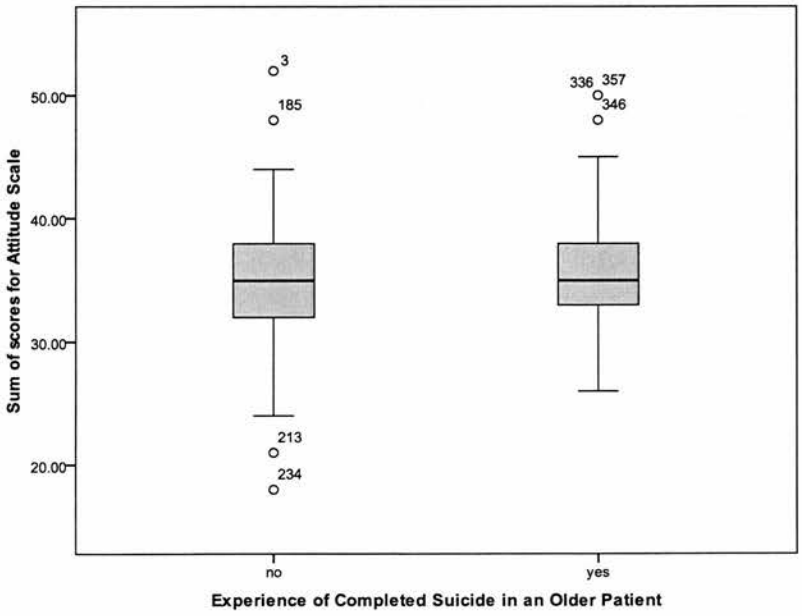
Histogram 1: Attitudes to Suicide Prevention among GPs with no Experience of Suicide



Histogram 2: Attitude to Suicide Prevention among GPs with Experience of Suicide

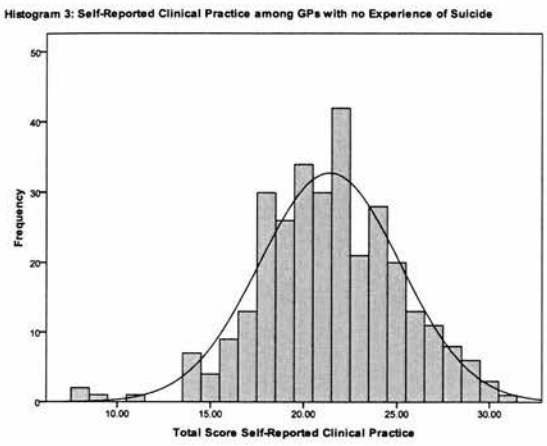


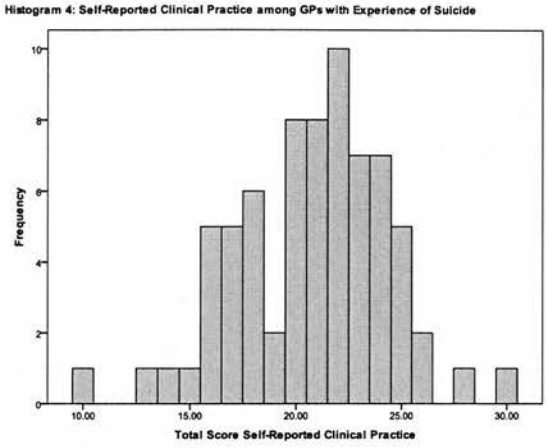
Box Plot 1: Experience of Completed Suicide in an Older Patient and Total Scores on Attitude Scale



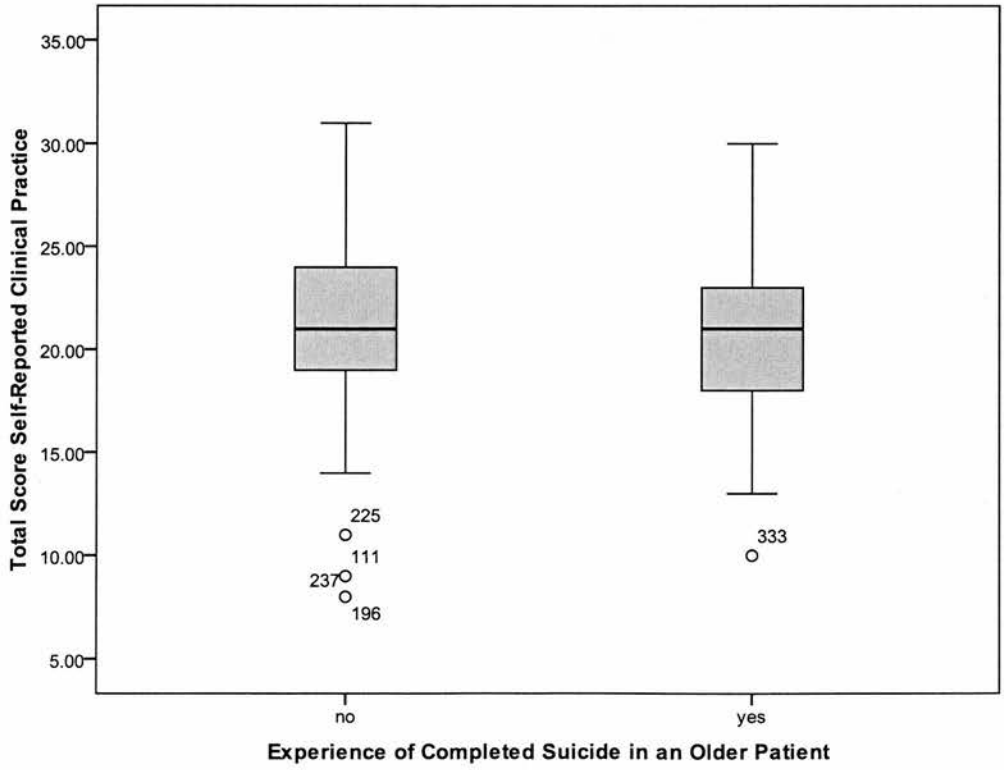
APPENDIX 6 (Cont.)

Self-Reported Clinical Practice:



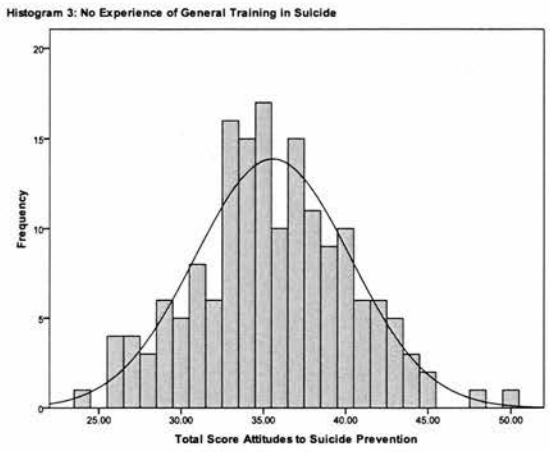


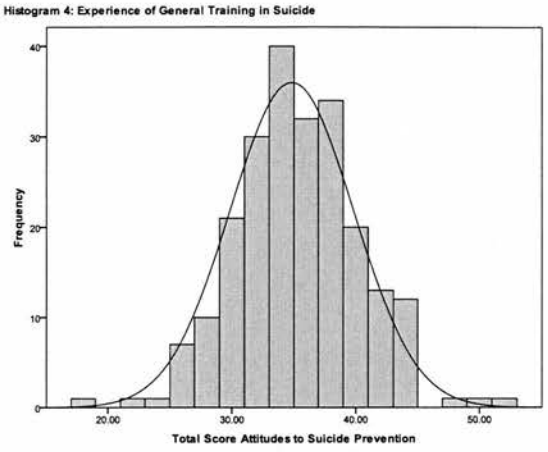
Box Plot 2: Experience of Completed Suicide in an Older Patient and Total Score on Self-Reported Clinical Practice Scale



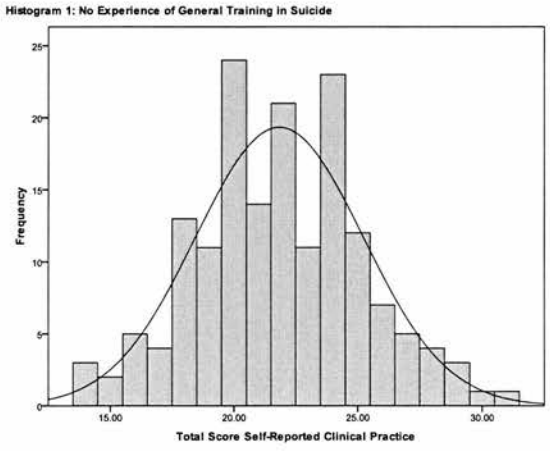
APPENDIX 7 – Explorative Analysis of the Data for Hypothesis 3

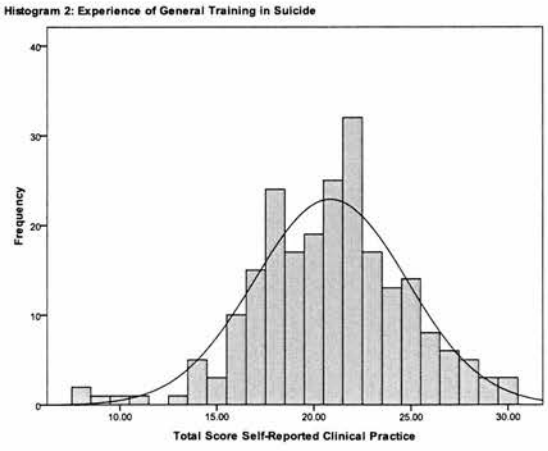
General Training on Suicide and Attitudes to Prevention in Older People





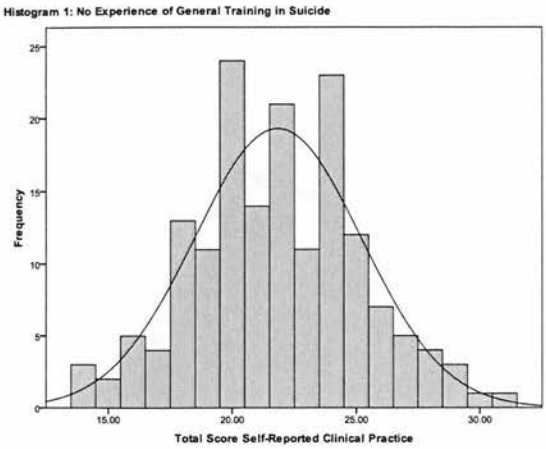
General Training on Suicide and Self-Reported Clinical Practice

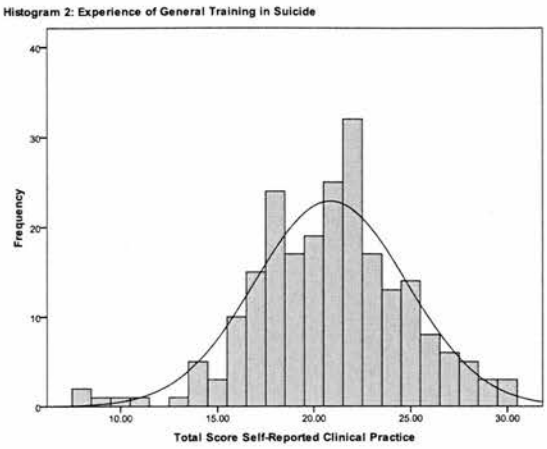




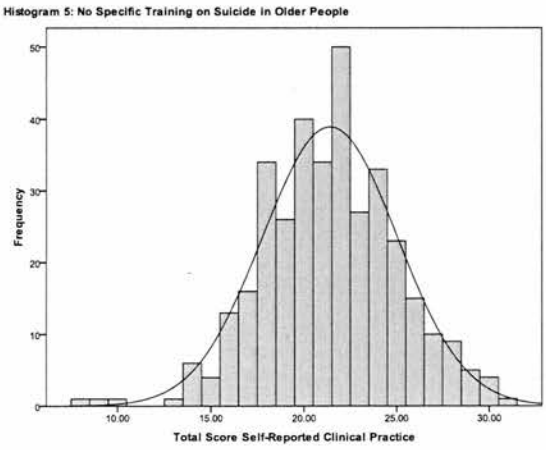
APPENDIX 7 (Cont.)

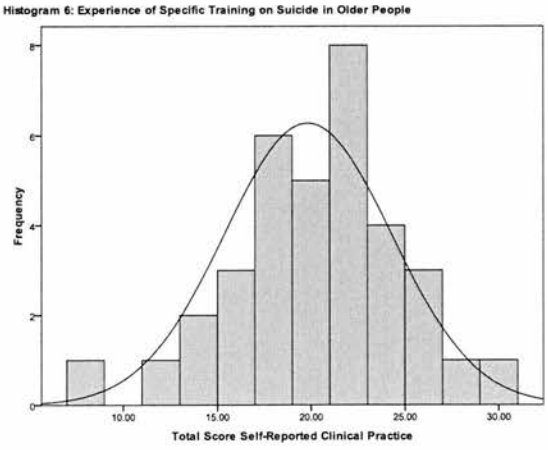
Specific Training on Suicide in Older People and Attitudes to Prevention





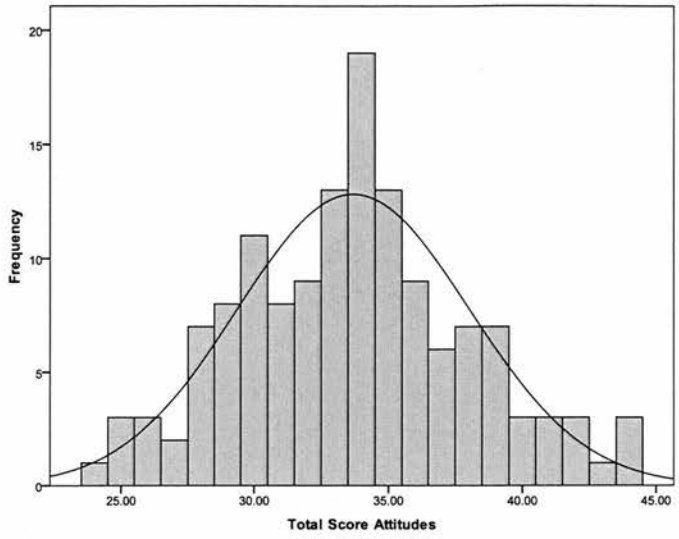
Specific Training on Suicide in Older People and Self-Reported Clinical Practice



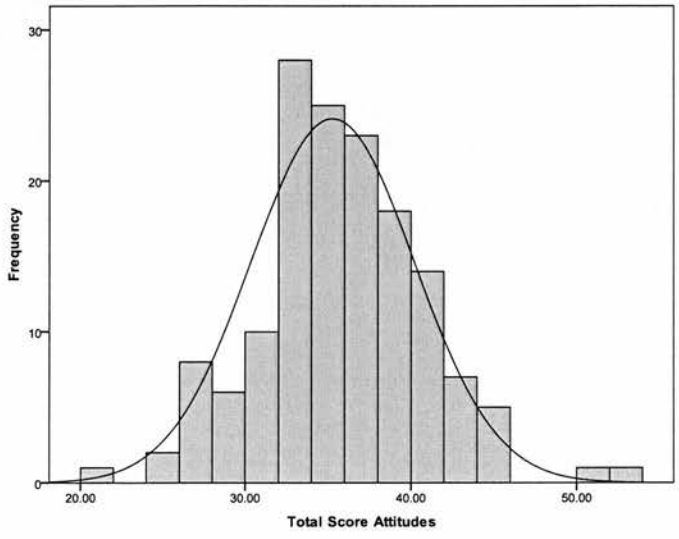


APPENDIX 8 – Explorative Analysis of the Data for Hypothesis 4

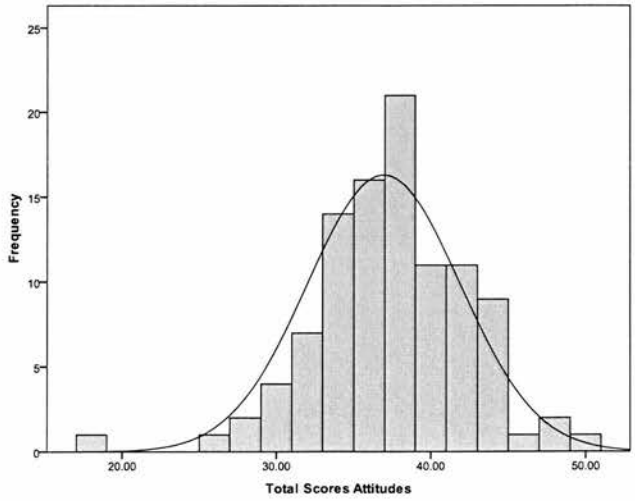
Histogram 1: Attitudes Towards Suicide for Ages <30 to 40 years



Histogram 2: Attitudes Towards Suicide for Ages 41-50 Years



Histogram 3: Attitudes Towards Suicide for Ages 51 to 61+ Years



APPENDIX 8 (Cont.)

Box Plot 1: Comparison of Total Attitude Scores for all Age Bands